Sindh Case Series -9

Discriminatory Development Paradigm of Pakistan

Naseer Memon

Discriminatory Development Paradigm of Pakistan

Naseer Memon

Center for Peace & Civil Society
A-89/11, Gulshan-e-Sahar, By Pass Gate
Wadhu Wah, Qasimabad, Hyderabad,
Sindh, Pakistan.
Ph: +92 – 22 – 2652401, Fax: +92 – 22 – 2652401
info@cpcs.org.pk www.cpcs.org.pk

Book Title:	**Discriminatory Development Paradigm of Pakistan**
Subject:	**Sindh Case Series -9**
Author:	**Naseer Memon**
First Edition:	**October 2011**
Second Edition:	**July 2012**
Published by:	**Center for Peace & Civil Society (CPCS)**
Design:	**Suleman Samejo**
Price:	**Rs. 250/=**

Books are available at:

- Mr. Books Islamabad
- Saeed Book Shop Islamabad
- Feroze Sons Mall Road, Lahore
- Thomas & Thomas Book House Karachi
- Kathyawar Book House Karachi
- Sindhica Kitab Ghar Hyderabad
- Fiction House Hyderabad
- Rabel Kitab Ghar Larkano
- Gul Kitab Ghar Shikarpur
- Junaid Kitab Ghar Dadu
- Sindhica Kitab Ghar Sukkur
- Marvi Kitab Ghar Tando Allahyar
- Mehran Kitab Ghar Mirpur Khas
- Hillal Kitab Ghar Mirpur Khas

Contents

Preface

Naseer Memon is a prolific writer and contributor to development literature in Pakistan, in general, and Sindh, in particular. His current book "Discriminatory Development: Paradigm of Pakistan" is yet another valuable addition. The articles in the book have a common thread: egalitarianism. They focus on the impact of development policies on the common people and cover two broad themes: political economy management with respect to the rights of smaller provinces and natural resource management with respect to impact on the people.

The first part covers issues relating to rights over oil and gas resources and the irony of how communities in resource rich areas suffer from low levels of income and human and social development. The searchlight is also placed on Balochistan, where a combination of economic exploitation, political exclusion and military repression has paved the way for a bloody insurgency. There is also focus on how priority to defense and debt servicing is taking a toll of MGD targets and the interests of poorer citizens of Pakistan.

The second part looks at natural resource degradation, climate change and natural disasters, with respect to the governance regimes dealing with these issues. The author attributes encroachment of waterways and deforestation by influential elements and failure to invest in early warning systems and in disaster protection infrastructure – underlined by the weak institutional performance of PDMAs and DDMAs – to poor governance; with consequential disastrous impacts on the lives and livelihoods of the people. He highlights the urgency of regional cooperation for forecasting and managing disasters and for protecting natural resources – riverine forests and

mangroves – to minimize the impact of floods, cyclones and tsunamis.

The book is a must read for all those who have an interest in people-centred development. They include policy-makers, but more importantly, parliamentarians and civil society activists whose advocacy is essential to translate ideas into legislation and policy.

Kaiser Bengali

Foreword

This compilation of articles and essays by Naseer Memon published brings together well-researched, analytically presented, fluently written, easily readable and extremely pertinent comments on a range of important issues confronting Pakistan in general and Sindh in particular.

As a full-time, professionally qualified development practitioner and as a concerned citizen who serves the cause of development on a voluntary basis as well, Naseer Memon personifies an unusual blend of education, experience, first-hand observation, direct engagement with change at the grass-roots level, a passionate concern for the welfare of Sindh and the well-being of Pakistan, rounded off with candour and sincerity.

That the writer sees the development process of Pakistan in a holistic manner is evident in the fact that he focuses on the fundamental subject of who controls natural resources. At the core of the concentric proprietorship circle, there exists the community in whose living area natural resources are discovered and evaluated. The structure of the modern nation-state has created ever widening circles of proprietorship of these resources with each circle making a claim to its own share or proprietorship. From the core of the community as represented by the Union Council and, ironically, the one with the least power, the circles expand to represent the Tehsil, the District, the Province and the Federation. These outer circles enforce ever-increasing shares until it is the Federal Government and its allied institutions that enforce the largest shares. For its part, the Federation asserts that the "shares" owed to the Province in which the natural resources are

exploited are re-paid indirectly and directly through the periodic awards of the National Finance Commission.

From time to time, the corporations or organizations that directly utilize natural resources are also required to contribute a part of their profits to the advancement of the area in which the natural resources are being developed. In a recent pronouncement it was said that the area of origin of natural resources will receive 2.5 per cent of income as royalty fee.

It is another matter that such transfers and awards, be they by the NFC or by other sources are not perceived as being fair or adequate by the 3 smaller Provinces. Naseer Memon's writings reflect this wide-spread perception of injustice.

A second central thought that permeates these writings is the simple yet profound necessity for those in-charge of Stated-directed development to ensure the rule of law in all aspects of the development process. In one major instance after another, be it the devastating delayed effects of the Left Bank Outfall Drain project on the health of Sindh's land or be it the prospective disasters for the human livelihoods and ecology that loom on the coastline of Sindh in view of the plans to allow waterfront developments, he emphasizes the paramount need to respect the principles of participative, consultative decision-making as much as the need to ensure that clearly defined procedures are followed before destruction is imposed in the guise of development.

By deliberately ignoring the statutory requirements for prior Environmental Impact Assessments to be conducted before governments make commitments to allow ecosystems to be disrupted by inflows of capital, people, materials and technology, those who have been given the mandate to guard

the law actually trample upon it and erode institutions and methods evolved over centuries of human experience. Perhaps the writer needed to reflect in this respect upon the irony that there appears to be no difference whatsoever when it comes to disregarding laws and rules between un-elected governments and elected governments.

A third major concern that emerges in these articles and essays is the general neglect of the social sector in Pakistan as a whole but in Sindh in particular. That this trend is nation-wide and affecting all 4 provinces, and not just Sindh or the other 2 smaller provinces is borne out by the fact that in the first week of September 2007 there has come to light an evaluation of the much-trumpeted "Parha Likha Punjab" programme conducted by the Government elected in October 2002 revealing an abysmal failure to achieve the targets. Naseer Memon laments the comparatively more dismal performance in Sindh where indicators suggest that, in certain respects, even Balochistan may have fared better and NWFP been certainly more efficient. Identifying the investments in debt servicing and defence, the writer moans the grim truth that the third, and the most important "D" i.e. the "D" for Development, and more precisely, for human development has consistently received the least share of funding.

A fourth issue that occupies Naseer Memon's attention is the failure to effectively utilise even those meagre resources that are allocated to programmes for human development as also for physical infrastructure. By referring to the lack of adequate monitoring and evaluation, the absence of tangible checks and balances to deter corruption and inefficiency, he underlines the massive loss suffered by the real victims: the people, whose money it is, and not just the institutions that provide the funds, whether this be our own State and governments (which are also

actually using the people's money!) or whether this is a regional institution such as the Asian Development Bank.

Taken together, these writings become a timely and useful single source of reference and information. They show that the writer has a genuine commitment to the values of transparency, accountability and equity as also to balanced and sustainable development.

Javed Jabbar

Part-I

Political and Socio-Economic Development

Labyrinth of New Provinces

Amendment bill for new provinces has agitated the already febrile political vista of the country. Momentous issue of new provinces has emerged as yet another divisive factor in much polarized society. The bill that has created illusive fervor among Sraikis and Hazarwals is being viewed as an ominous move by others. Sindh Bachayo Tahreek, a conglomerate of Sindhi nationalist parties has given a public strike call in Sindh against the bill, which they consider as a lurking peril for the unity of Sindh province.

Tone and tenor of the bill carries innate controversy. Paragraph four of the bill reads "And whereas the provincial boundaries are not sacrosanct and kept changing in Indo-Pak subcontinent since3 1526 on administrative grounds and for the convenience and wellbeing of the people". Subscribing to this logic would even render national boundaries non sacrosanct because alike provinces, boundaries of the countries have also been redrawn in the region since 1526. Once united India is now fragmented in three countries. Hence terming provincial boundaries non-sacrosanct would accord legitimacy to the view that country's boundaries can also be redrawn on similar grounds. Provincial boundaries of these provinces also shape national boundaries with India, Afghanistan and Iran. Hence the bill can be construed as a mean to legitimize the demand for provinces to even secede through a referendum as their boundaries can be redefined through referendums if the amendment becomes is entrenched in constitution. In historical context today's provinces are not mere administrative boundaries but sacred homelands with a rich history of thousands of years. People in these provinces own a glorious history of rich culture and traditions. These provinces joined this federation acceding to a shared goal of deliverance from slavery of aliens while

maintaining their historic identities and geographic limits. In fact the resolution of 1940 refers to "states" which later degenerated into "provinces" through distorted version.

Apprehensions of people on referendum approach are not baseless as they have witnessed chicaneries of phony referendums in past have been legitimizing unconstitutional expediencies. In a country having electoral rolls reeking with almost fifty percent fake votes and a history of engineered elections, deciding provincial boundaries through referendum would result in nothing less than anarchic and catastrophic ramifications. Particularly Sindhis insinuate this bill as a precursor of division of the province at later stage. Likewise Seraiki nationalists believe that the bill does not candidly mention Seraiki province, it rather refers to Southern region of Punjab; the term loathed by Seraikis. The bill also refers to bifurcation or even trifurcation of the province. This is considered by Seraikis as a subtle reference to Bahawalpur province that may jeopardize Seraiki's demand for their province. What is being forgotten here that redrawing provincial boundaries may straddle to other provinces too as some Baloch ethnic groups in Seraiki belt also indicate their preference to join Balochistan. Similarly DI Khan and adjoining areas of southern Khyber Pakhtunkhwa demand to be part of would-be Seraiki province. This ethnic tapestry makes the situation more complicated and can unravel the whole map. In a political ambience mired in deep rooted mistrust and riddled with a series of betrayals, any attempt to carve out new provinces without building consensus and proper homework may culminate in ethnic strife and further destabilization the fragile political array.

Constitution is widely misinterpreted on providing way out for creating new provinces through Article 239 (4). In fact the

aforementioned clause only permits alteration in limits of a province and not creating new provinces. The clause of the article restricts any bill that can affect existing provincial limits can be moved without two third majority support from the assembly of the concerned province. The 20th amendment bill has not received any endorsement from any province and therefore transgresses the constitutional. This bill also sullies the very spirit of much trumpeted 18th amendment that boasts greater autonomy to provinces. The proposed bill provides iron fist to the federal government to even change boundaries of any province without consulting elected representatives of the province. Hence it is an antithesis of 18th amendment and anathema to provincial autonomy as promised in the constitution; a stack of papers which has also remained non sacrosanct for most of the national history. Provincial autonomy would be reduced to a mere ruse if national assembly is allowed to embark upon the worst possible encroachment in provinces' domain through this amendment.

Finally the very justification presented in the impromptu bill for creation of new provinces is paradoxical. The last paragraph of the bill seeks to justify this demand based on the increased population, lack of social service delivery and dispensation of justice to the people of far flung areas. What is perplexing that the proponents of the bill are not willing to carve more districts in Karachi which is chronic victim of developmental disparity. If more provinces could guarantee more development, Balochistan and Sindh had not been on the lower rung of human development. All the reasons mentioned in the bill to justify new provinces are basically governance issues and can easily be addressed through improved governance and genuine devolution of power to the lower echelon of the society. Judicious distribution of resources within provinces, efficient and effective delivery of public services, introducing merit based

decision making and veering resources from defense and debt servicing to human development can address all the problems mentioned in the bill. If fundamental changes are not introduced, even new provinces would be wading through the existing imbroglio.

Simmering Cauldron of Karachi

Karachi has become an ever bleeding wound. Politics in the city is so fractious that a single incendiary statement results in the death of dozens. Debilitated by fading hope of sustainable peace, the business community and some political parties have demanded army to intervene. Fratricide in Karachi has proved that the prevailing malaise is far deeper and army intervention can only bring semblance of temporary peace. Long term socio-political solutions are already over due. Karachi is not a banal law & order problem that can be assuaged through bigger guns.

The ongoing turf war among different interest groups is embedded in the wrong politics of myopic minds. Ethnic and social stratification fueled by free movement of arms and ammunition has made the city a fertile battle ground for fiercely fragmented populous. Roots of the issue can be traced into unregulated migration and refugee settlement in 1947 that laid the foundation of the power-keg, now called Karachi. Being the most developed port city in 40s, the smart, educated and socially advanced migrant community fastidiously chose Karachi to be their abode. To make it almost exclusively a migrant city, administrative steps were taken to keep other communities specially the natives at bay. According to a report of Pakistan-Sindh Joint Refugees Council by May 1948 more than 700,000 refugees entered Sindh and three-quarters of them settled in Karachi alone. This sea change in demographic composition was

enticing for newly settled migrants but without realizing that the natives were seething with indignation. Since Sindhis were systematically excluded from Karachi through evacuee property laws and other administrative measures, it created an ever yawning crevasse among the two permanent communities of Sindh. Baring few hardly any serious efforts were taken to forge some meaningful bond among Sindhi and Urdu speaking population. Being more educated, socially advanced and better represented in civil-military bureaucracy, urban leadership scorned the rural based natives and preferred alliance with Punjabi-led civil-military establishment. Streak of superiority complex and imprudent political arrogance generated ambivalence and the divide continued to expand that actually jeopardized shared interest of both Sindhi and Urdu speaking communities. Enigmatic murder of Liaqat Ali Khan marked the decline of migrant's supremacy in the state matters. Over the period, Punjabi-led establishment became the prime ruler and the migrants were reduced to a junior partner. After the death of Liaqat Ali Khan, the politics of Urdu speaking community has remained in a pernicious trap of the sense of insecurity. Outmaneuvering by Punjabi establishment sowed the seeds of insecurity among them. This sense of insecurity was fully exploited by their leadership while the false sense of superiority did not allow them to get mainstreamed with Sindhis. Immigration of Pakhtuns in 60s further multiplied their feel of insecurity. With the rise of Bhutto, rural Sindh strode from a completely feudal dominated to a gradually transforming middle class based society. This middle-class led Sindhi society asserted its legitimate political share in the province and Urdu speaking population considered them as competitors. Language riots and the movement against Bhutto in 70s further drifted Urdu speaking population away from Sindhis as the urban leadership aligned with anti-Bhutto security establishment thus paving the way for a dark decade. In the ensuing years,

indifferent attitude of urban population during MRD movements of 1983 and 1986 was another lost opportunity to cement ties with local population. Isolation of Urdu speaking community was further sharpened when MQM raised the slogan of Mohajir nation and entered into bloody confrontation with Pakhtuns, Punjanbis and Sindhis in 80s and 90s. Ghastly incidents like 30th Sept and 1st Oct 1988 by hawks on both sides made the matters worst. This made Urdu speaking population acrimonious to all other communities thus becoming more vulnerable to exploitation through the deepened sense of insecurity. The irony is that a sense of insecurity was initially inculcated by urban leadership, then fueled and ultimately exploited to its full at the cost of thousands of innocent lives.

In the meanwhile an active social transition continued in rural areas of Sindh and during 90s a self-grown rural middle class made inroads into urban centers. Excruciating law & order situation and faltering agriculture economy forced rural Sindhis to migrate to urban enclaves of Hyderabad and Karachi. Ethnic riots in 80s and 90s virtually bifurcated Hyderabad and Karachi into Sindhi and Urdu speaking precincts. Since then the short spells of peace were frequently punctuated by abominable bloodshed. However the major conflict in Karachi started when unabated migration of Pakhtun community started claiming their share in businesses and politics. In 2008 when Pashtun nationalist party Awami National Party (ANP) first time scrambled two seats in provincial assembly and became shareholder in Sindh government, the sense of insecurity attained new peak among the Urdu speaking community. Unlike Sindhis; Pakhtuns are armed, militant and are fortified by political patronage. Another recently emerged force is predominantly Baloch militant group. Spook of false sense of insecurity and isolation has now attained new heights among Urdu speaking population as they feel that Karachi is no more a

unilaterally regulated entity. This has led to the lunacy of killings and arson in the city. Demagogues of urban leadership went too rigid on local body system and the administrative set up in Karachi thus losing another opportunity to repair ties with native Sindhis. The ordinance of two administrative systems signed by the Governor obliterated the façade of MQM's claim to be friendly with Sindhis. Merits of either local governance systems apart; the very decision was bereft of political prescience and has eroded the residual scant affinity among the two permanent communities of Sindh.

Urdu and Sindhi speaking natives have a shared destiny. A peaceful Karachi would only be possible when this natural alliance is allowed to proliferate on fair footing. Sense of superiority, appetite for sole proprietorship of Karachi and ruling through gun power would only add insult to injuries of Karachi and its dwellers. Leadership of Urdu and Sindhi speaking people should demonstrate sagacity for the long term interests of the permanent residence of Sindh.

Balochistan Issue in Historical Perspective

The unfortunate situation that has unfolded in Balochistan, has far deeper roots than mere recent episode of Bugti's killing. History of injustice meted out to Balochistan has a long chain of events, which triggered the recent wave of reaction during past few years. In fact any one interested to understand today's Balochistan needs to traverse through the terrible track of history. Balochistan's forced accession to the country began the end some sixty years ago.

At the time of partition Balochistan was administratively into three major parts. The most significant part was federation of Kalat state, which comprised of four small states viz. Kalat, Makran, Lasbelo and Kharan. Kalat was the most prominent among them, which was the largest among four, spread over 78,000 sq.miles. Khan of Kalat would practically rule the whole Federation of the four states to a varying degree. However the Sirdars of the three states enjoyed autonomy and Khan would not interfere too much in their internal matters. The Sirdars had friendly contracts with Khan. The Kalat state would enjoy substantial autonomy and British rule was restricted to spheres of Currency, Defense, whereas internal affairs were under the domain of the state, being run under upper and lower houses of Dar-ul-Umra and Dar-ul-Awam. The houses were represented by various Sirdars to run the affairs of the state. At the time of partition, representatives of the two houses were not much inclined to join the new country. They wanted to remain independent but have friendly contract with Pakistan. Founder of Pakistan himself stated in July 1947, that the states would have a free choice to join either of the two newly born countries or stay independent and Muslim League would respect this right and has no intention to impose its will on any state. On 2nd June 1947, the Viceroy of India Mount Batten also expressed that the states would be independent to take the path of their will. However partition brought new realities and faces on surface and Khan of Kalat was aggressively pursued to become part of the country of Muslims. On the other hand Khan of Kalat has been insisting that he would not take any decision individually unless endorsed by the Sirdars who represent the people of their areas. A session of Dar-ul-Awam was held on 16th December 1947 to discuss the situation. Members took a firm position on maintaining independence of the state and were quite strong against the central government's pressure. Quotes from the speeches of some prominent leaders are worth

reading to understand today's Balochistan. The leader of the Nationalist Party Mir Ghous Bakhsh Bizenjo said "....We are definitely Muslims but that should not mean loosing our freedom and get merged with aliens. We are willing to enter in a prestigious friendly relationship but not under humiliation. ...We can't commit the crime of merging Balochi nation in any other one. If Pakistan treats us as a free nation we will welcome any contract but if she does not agree it would be an undemocratic act which will be unacceptable. If we are forced under any undemocratic manner than we will prefer sacrificing our lives to protect our freedom." Another parliament member Wadero Sher Mohammad used even stronger words by saying that we have just got rid of a slavery and would not like to go under another one. The parliament rejected the option of joining the new country with consensus. Central Government continued pressure tactics to pursue Khan of Kalat to follow its wishes. In March 1948 Khan of Kalat faced treason charge blaming him of contacting India to annex Kalat. Sensing the threat of military action, Khan of Kalat succumbed and signed the accession documents on 30th March 1948. Khan was expecting that he would continue to enjoy autonomy in the internal affairs f the State however all his expectations evaporated when he was told by the Central Government that a Political Agent is being appointed for Kalat and the Prime Minister of the State would have to act on his advice even on internal matters. This came as a last blow for the Khan. He tried to visit some friendly countries but was no allowed to leave the country. Khan was upset with the attitude of the Central Government and felt regret on his past terms with the Governor General of the country. He wrote. "Balochis always supported struggle for freedom (of Pakistan). At the time when no one would dare contact with Quaid –e- Azam we appointed him Legal Advisor of the State. Both Jinnah and his sister Ms. Jinnah were weighed in gold and silver in September 1945. Quaid-e-

Azam weighted 124 pounds and Ms. Jinnah 104 pounds. When I presented them gold and silver equal to their weight and a necklace of one lack rupees to Ms. Jinnah, both were amazed. When Khaksars attacked Quaid e Azam, I rushed my personal guards for his security. He was the only person who would receive guard of honor with 21 cannon fires, whereas such protocol was only meant for the Viceroy.

This friction went on till One Unit came and the country went under political anarchy, which culminated in the first Marshal Law. One of the justifications mentioned for imposing Marshal Law was situation in Kalat, which was termed as an attempted secession by the Khan. He was accused of approaching Shah of Iran for accession of Kalat and hoisting old state flag at Miri Fort. Considering it as an act of treason, military action was launched. In the first week of October 1958, Kalat was cordoned off. Khan of Kalat Mir Ahmed Yar Khan narrated the ordeal like a war scene. He writes "With prayer call in the morning, tanks, armored personnel carriers and trucks surrounded the town. Cannons started firing and six innocent citizens were killed. I enquired the reason of action from an army officer posted outside my home. I was told that 80 thousand armed persons with heavy arsenal have been gathered in the fort and mutiny has been declared by me. The accusation was being leveled against a person for whom Quaid-e-Azam always acknowledged that Pakistan would not have come into being without my help. I tried to convince the soldier but he was obeying the orders. They couldn't find 80,000 armed persons from my home but they caught some of my servants and guards. I was also taken into custody. I was taken through the streets of town. Then I was kept confined with my family and my home was looted. I traveled from Kalat to Lahore with strange feelings. I thought what we Baloch's have done wrong. Are we being punished for crime to love the country and its founder?"

Reaction to this action was wide spread and severe. Octogenarian Nawab Nauroze Khan picked arms with his comrades and took to the hills. Furious battle began and according to reports of that time, insurgents wiped out a platoon of Frontier Corps' Psihin Scouts. Some foreign media reports claimed that insurgents also shot down three bombarding aircrafts of air force. The insurgency continued for a year and half. Government approached guerillas for parleys. Nauroze Khan's nephew Sirdar Doda Khan was sent with holy Quran to offer peace. Nawab Nauroze honored Holy Quran and guerillas descended from hills. However promises were shattered and 11 of them were caught and tried in a military court. All were hanged except the old man, who was left to bear the pain of tragedy. Sardar Sherbaz Khan Mazari in his book "Journey to Disillusionment" narrated the episode. "The modern legend that has evolved around this episode is worth mentioning. 'Is this one your son?' an army officer cold heartedly asked Nauroze Khan as he pointed to the body of the elderly warrior's son. Nauroze Khan stared at the soldier for the moment then replied quietly, 'All these brave young men are my sons.' Then looking at the faces of his dead supporters, he noticed that the moustache of one of them has drooped in death. He went over the body and tenderly curled the moustache upwards while gently admonishing 'Even in death, my son one should not allow the enemy to think for one moment that you have despaired."

The next wave ensued in February 1973, when Bhutto government dismissed NAP government in the province. This undemocratic act resulted in serious resentment and Baloch youth again took to hills. Once again force was used to subdue them. Iran provided Cobra gunship helicopters to the country, which were used to target Marri and Mengal rebels. On 3rd September 1974, a major operation was launched in Marri

nomadic tribal areas of Chamalang. Scores of people were killed indiscriminately. Official figures claim death of 125 guerillas whereas Baloch leaders claim that thousands were killed throughout this wave. This was a bloodied operation, which only exacerbated the matters. Repeated use of forces only rubbed salt in the wounds of people of Balochistan, serving little to so called national integrity.

The recent rise of violence in the mountains of Balochistan was nothing but an extension of the past stories. Only years and faces were changed all the rest was a mere replication of earlier exercises. Having this historical context of atrocities with Balochistan, very little was done by the preceding governments to address the "cause" which brings bloody "results" after a silence of every few years. The ongoing wave of violence in Balochistan has far deeper roots in the institutional decay of politics in the country. Political, social and economic inequalities and injustice have surpassed all peaks in the country and smaller provinces have turned into fierce volcanoes. This is very unfortunate that Balochistan was misdiagnosed as ever. Without diving in the depth of crisis and taking a consoling approach, Balochs were once again termed as rebels and terrorists and were treated like an enemy army. Economic exploitation of Balochistan is more than vivid and merits some sensible solutions rather than ruthless exercise of arms and killings.

No one can deny that Balochistan never got the deserving return what it contributed for the economic development of country. Richness of mineral resources of Balochistan can be gauged from the following facts.

- Balochistan shares 49% of total livestock in the country
- In 2003 it produced about 1.4 million tons of fruit

- In 2002, total 121,212 M Tons of fish was caught. Only 11,575 M Ton was the local consumption whereas 109,655 M Ton fish was available as exportable surplus.
- Asian Development document "Balochistan Economic Report (Project Number 39003-Dec 2005)" says that "Thirty-nine minerals, of the recorded 50, are now being mined in the province. In FY2003 this sector yielded revenues of almost PRs1 billion. The discovery of large copper deposits in the Chagai district, coupled with the coal and iron ore production in the province, can generate significant additional income for the provincial government."
- A report appeared in daily Dawn on 4th April 2005 says that "Minerals deposits usually occur within minerogenic zones (of non-metallic minerals) and metallogenic zones (of metallic minerals). Of nine such zones in Pakistan, five are located in Balochistan. Base metal deposits, such as copper, lead and zinc, are found in Chagai, Khuzdar and Lasbela Districts. Silver and gold in association with Saindak copper ore has recently been re-assessed. Balochistan also hosts several sizeable sub-bituminous coalfields in the Quetta-Harnai-Duki region."
- According to Pakistan Energy Book-2005 about 1.5 million toms of coal was mined from Balochistan, which is about 40% of the national product of coal. Alone three sites Degari, Sharig and Sor Range produced coal of 1.14 billion rupees.

These are only few glimpses of the rich mineral resources of Balochistan. The most important one is the treasure of natural gas deposits, which turned the fate of country in early 50s benefiting the whole country except Balochistan. The gas well drilled by Pakistan Petroleum Limited (PPL) on 10th October 1951 opened new windows of development for the infant

country with economy at infancy. The 10 thousand feet deep gas reserve was estimated as 10.78 Trillion Cubic Feet volume. Over past 55 years country has consumed 8.14 TCF leaving 2.63 TCF behind, sufficient for another two decades considering the trend of consumption. In 2004-05 it produced about 920 million CFT every day yielding annual product of 336,493 Million CFTs of gas. The gas discovery played a very significant role in socio-economic development of Punjab and parts of Sindh, particularly the areas with urban industrial base areas. Providing fuel to national economy for years the gas reached in Balochistan only after 25 years when Quetta first time received LPG in 1976. Six decades are gone, even today Balochistan has only 3.4% gas consumers of the country as compared to 51% from Punjab alone, which contributes only 4.75 gas of the total national gas production. According to political leaders of Balochistan the province contributes 85 billion rupees each year through gas revenues but it receives only around 7 billion rupees from Federal government. What Dera Bugti received in return from the wealth it generated is evident from Human Development Report-2003 of UNDP, which ranked Dera Bugti last among the 91 districts of the country on Human Development Index. The eye opening report reveals that among the top 31 districts on HDI, only 3 belonged to Balochistan whereas the province shared 12 among the lowest 30 districts on the HDI.

It transpires that probably deprivation is the best crop Balochistan ever reaped from nature's generous endowment. All indicators of life in the province tell a terrible tale. The figures given in Parliament Committee (formed by the government) report are the enough evidence in this regard. The province has 26.6% literacy against national average of 47% and corresponding figures of female literacy are 15% and 33%. Country provides sanitation facility to 18% population against only 7% in Balochistan. The Infant Mortality Rate

in the country is 100 (per 000 live births), whereas Balochistan has 108. Mother Mortality Rate in the country is 350 (per hundred thousand) and the province has frighteningly high 600. About 75% villages of the country are electrified and only 25% in Balochistan.

Poverty is another measure to depict grim picture of the state of human development in Balochistan. According to Pakistan Integrated Household Survey 2001-02, Balochistan homes the highest percent of poor population with 48% in the province and the worst in rural areas with 51% population living under poverty. Even common people don't enjoy ample access to government subsidies. The simplest example could be existence of only 32 Utility Stores throughout the province whereas Islamabad alone has 34 Utility Stores. All these indicators clearly indicate towards more socio-economic development in the province to mitigate impacts of the development gaps. Although government issues very tall figures of development investments in the province but the local masses have reasons to believe that these development interventions are meant more for aliens rather than them. Local people strongly feel that the great development showpieces of Coastal Highway and Mirani dam came only when a mega port city of Gawadar is needed by the government. The way property sell of Gwaddar is being projected in media, tells in plain words that hardly any Baloch population would survive there and results are bound to be the same as happened with indigenous people of Karachi who now live like Read Indians in centuries old coastal villages deprived from almost every basic human life facility. This level of injustice that Baloch people have very genuine complains, which need to be redressed through some sensible interventions rather than using state power to crush the voice for genuine rights of people and the land which always bestowed prosperity to the country.

From East Pakistan to Bangladesh

Not only that East Pakistan was kept economically deprived and politically suppressed, it was also under-represented in the state structure. The share of the Bengalis in senior level civil services was also flagrantly violated

Disrespect to culture, denial to right of rule, economic exploitation and a discriminatory development paradigm were the key causes of discontent in the then East Pakistan that eventually culminated in the creation of Bangladesh. The myopic attitude of both the civilian and military leadership grossly underestimated the power keg of East Pakistan that left deep scars of embarrassment on our national history. While language and culture are central to most rights-based movements, economy and politics are the incendiary triggers of perpetuating ghastly disgruntlement.

Undeniably the social fabric and political configuration of East and West Pakistan was poles apart. While West Pakistan was predominantly a feudal-led body of politics and society, East Pakistan had an entirely different socio-political vista. After 1857, Bengal became the first province under the British rule. It was the first regulation province of India under the jurisdiction of a High Court. Society and politics in Bengal was erected on starkly different building blocs not in jibe with the other provinces of Pakistan where British rule was deeply engrained in typical colonial structures and socio-political ambience. The landed aristocracy that shaped today's Pakistan was annihilated in Bengal in 1950 with the introduction of the East Bengal Estate Acquisition and Tenancy Act. It effectively routed landlordism in Bengal by fixing individual holdings at a mere 3.3 acres per head or 33.3 acres of land per family, whichever is less. The agriculture census of 1963-64 shows that out of 6.2 million

farms some six million were of less than 12.5 acres size and 50 percent of them were only 2.5 acres or less. On the contrary, West Pakistan was marked by large land holdings, especially in Punjab and Sindh. For example, 30 percent of the land in Sindh in 1952 was owned by only one percent of the owners and the average holding was above 500 acres. In Punjab, 50 percent of the land was under the control of zamindars (landlords). This sufficiently indicates the distinct social and political milieu of the two wings. Since West Pakistan held hegemony over the decision making process, the Spartan and vibrant middle class-led East Pakistan often confronted the policies drawn and imposed by the landed aristocracy of West Pakistan.

Resource hemorrhage and discrimination in pecuniary matters against East Pakistan was the key cause of conflict. In 1948-50 when East Pakistan had a net balance of payments surplus of Rs 622 million, West Pakistan had a net deficit of Rs 912 million. Similarly the foreign and inter-wing trade balance of the two wings from 1949-50 to 1957-58 shows East Pakistan having a surplus of Rs 3,636 million as balance of trade with foreign countries against the net deficit of Rs 3,047 million of West Pakistan on the same account. The trend remained consistent during the first and second five year plans when East Pakistan had a net surplus and West Pakistan had a net deficit in foreign trade and the surplus of East Pakistan was used to offset the deficit. Probably this prompted Sheikh Mujib to demand two separate currencies for the two wings under his popular six-point formula.

The resource sharing conflict might have been assuaged had some reasonable balance in benefit sharing been maintained. What riled the Bengalis was unremitting discrimination in development opportunities. For example, the GDP growth in East Pakistan during the period was 2.2 percent against the

heavily skewed 3.1 percent of West Pakistan. During the same period, per capita income in East Pakistan plummeted to -0.1 percent against +0.8 percent increase in West Pakistan. Likewise, during the five years from 1954-55 to 1959-60, GDP growth in East Pakistan was only 1.6 percent, i.e. half of West Pakistan's 3.2 percent. Per capita income in East Pakistan nose-dived to -0.7 percent against +1.2 percent in West Pakistan.

East Pakistan having almost 54 percent population was also discriminated against in public sector development. During the first five year plan, the total revenue expenditure in East Pakistan was Rs 2,540 million, which was less than one-third of the Rs 8,980 of West Pakistan. It was marginally ameliorated in the second five year plan from 1960-61 to 1964-65 when East Pakistan received Rs 6,254 million under the public sector development programme against Rs 7,696 million for West Pakistan, yet it was still 19 percent less. Cumulative figures of development expenditure of the two decades from 1950-51 to 1969-70 further explain the economic prejudice. Total development expenditure in East Pakistan remained disproportionately Rs 29,960 million against Rs 61,980 million in West Pakistan. Per capita GDP growth is another relevant indicator, which also depicts the same trend during the last ten years from 1959-60 to 1969-70. Per capita GDP growth in East Pakistan remained 17 percent against 42 percent in West Pakistan.

Not only that East Pakistan was kept economically deprived and politically suppressed, it was also under-represented in the state structure. The share of the Bengalis in senior level civil services was also flagrantly violated. During the first five years of the country, senior cadres of several departments were completely bereft of Bengalis. There were no Bengalis on any senior positions in the Departments of Commerce, Intelligence and Statistics, Supply and Development, Petroleum, Paper and Stationery Wing, Inspection Wing, General Concession Wing, Central Engineering Authority, Coal Commissioner and Textiles.

This sufficiently narrates the sheer discrimination and economic plight of East Pakistan. The chief of the Constitution Committee, Justice Shahabuddin, said in his report that colonial behaviour was adopted towards the Bengalis. Lacking prescience, the political and military leadership rather than opting for introspection embarked upon stereotyped narrations. General Ayub rabidly loathed the Bengalis. He once vented his spleen by saying: "I am surprised by Bengali outlook. They have cut themselves off from Muslim culture through abhorrence of the Urdu language...making themselves vulnerable to Hindu culture." On September 7, 1967 he wrote: "God has been very unkind to us in giving the sort of neighbours [India] and compatriots [Bengalis]. We could not think of a worst combination. Hindus and Bengalis...If worst comes to the worst, we shall not hesitate to fight a relentless battle against the disruptionists in East Pakistan. Rivers of blood will flow if need be, unhappily. We will arise to save our crores of Muslims from Hindu slavery." Certainly General Ayub was no exception in his fulmination against the Bengalis.

An assortment of such factors impregnated pernicious consternation among the Bengalis. Persistent political schism morphed into fratricide in 1971 that culminated in dismemberment of Pakistan.

Daily Time-December 23, 2011

How Sindhi Language Survived

Sindhi is one of the oldest languages in the sub-continent and the most developed language among original languages of today's Pakistan. Many books were written in Sindhi from the 17th century and some of them were also taught in curricula. When Arabs entered India, Sindhi was an advanced language

and many Arab writers mention that Sindhi was the commonly spoken language in Mansura, the then capital of Sindh. During Mughal rule, Sindhi textbooks were in common use. In the 19th century, modern literature and journalism flourished in Sindhi. When Urdu-Hindi controversy surfaced in India, the Bombay government appointed a committee in 1913 to resolve the conflict. The Committee recommended teaching in Urdu to satisfy Muslims. When the report was circulated to district officers of Sindh to seek opinion from prominent Muslims; Sindhis opposed the recommendation. Wazir of Khairpur state commented that the conditions prevailing in this province are vastly different and Sindhi language is as much the Vernacular of the Moslem Community as that of Hindus of Sindh. District officers also held similar views and Sindhi continued to be the language of school education. Sindhi language took strides during British raj. After Sindh was occupied in 1843, it was annexed with Bombay. In 1848, Governor of the Province Sir George Clerk ordered to make Sindhi the official language in the province. His order made it mandatory for civil officers to qualify examination in Sindhi language. The then Commissioner of Sindh Sir Bartle Frere issued formal orders on August 29, 1857 advising civil servants in Sindh to qualify examination in Sindhi. He also ordered Sindhi to be used in all official communication. Seven-grade education system commonly known as Sindhi-Final was introduced in Sindh. Qualifying Sindhi Final would make a candidate eligible for employment in Revenue, Police and Education departments. In 1854, Arabic script was adopted for Sindhi language. In 1848 and 1855, English-Sindhi dictionaries were produced. Eminent German scholar Ernest Trump published grammar of Sindhi Language in 1872. In 1923, compulsory education was introduced in Sindh through Bombay Primary Education Act. By 1954 some 53 talukas of Sindh were covered under the law.

The tide was reversed with the partition of India. Influx of hundreds of thousands of migrants from India and concomitant mass exodus of Sindhi Hindus to India transformed the demography in Sindh in a matter of a few months. Sindhi Hindus were the most educated people who dominated civil services, agriculture and businesses in Sindh. With the hemorrhage of middle class, Sindh lost its vibrant segment of society that was replaced by a community culturally alien to them having nothing common except religion. This tide resulted in a cultural distortion of Sindhi society. Natives were barred from purchasing urban properties evacuated by Hindus. Fertile land, opulent urban residential buildings and bustling business centres were handed over through uncorroborated, trivial and hilarious claims. Sindhi Muslims were effectively confined to rural agrarian society, which relegated their centuries old culture and language into a forgotten past glory. All urban centres of Sindh were bereft of Sindhi language and culture. Names of the roads and streets were Islamised and Sindhi culture was condemned as a remnant of loathed Hindu customs. Karachi at the time of partition had 0.4 million population with 61% Sindhi-speaking souls compared to only 6% Urdu speaking population. In 1951, the same city had a swollen 57% Urdu-speaking population and Sindhis shrunk to a mere 8.6%. At the time of partition, Karachi had 1,300 Sindhi medium schools which were subsequently converted into no-go area for Sindhi language. Everything pertaining to Sindhi culture was demonized as a legacy of Hindus. Sindhi which was medium of instruction at various levels in educational institutions and a language of official communication in revenue and judiciary before partition suddenly became an orphan child in the new state. The discriminatory treatment meted out to Sindhi language and culture riled Sindhis who were the first nation in Pakistan to adopt a resolution in favour of Pakistan. Sindhi felt betrayed and alienated as all their dreams associated with the

new country turned into a nightmare. The progressive and liberal Sindhi nation never had any problem with Urdu language but now they were seething with indignation as Urdu was imposed as the only national language clamping recognition of all other languages of Pakistan. Adding insult to injury, Syndicate of Karachi University in 1956 decided to adopt Urdu as the medium of examination replacing Sindhi. This inept decision widened the crevasse among the permanent residents of Sindh and caused a major setback to the feeble flicker of cultural assimilation of the migrant community with natives.

In a bid to assemble an artificial nation by denying historic identities in the federation, perniciously injurious decisions were taken by the rulers. A rare manifestation of their wit resulted in One Unit to neutralize political supremacy of Bengal. One Unity was a brazen denial of historic identities of the nations that created Pakistan. Rather than building a nation by respecting cultural diversity, the rulers put cart before the horse and adopted frivolous approach to forge a nation which did not exist in reality. Under the One Unit regime, Sindh like other provinces was officially deleted and merged into 'West Pakistan' which had no identity in history. Sindhis launched a political movement to restore their identity. Hunger strikes were observed and processions were taken out to restore identity of Sindh and print electoral rolls and national identity cards in Sindhi language. The Constitution of 1956 had a provision for Sindhi and Urdu medium students to study subjects in both languages in Sindh. However, gradually Urdu medium students almost stopped studying the Sindhi language subject which further weakened cultural cohesiveness in the province. Karachi Municipal Corporation made Urdu its official language and Sindhi was removed from all official plaques in the city.

In the 50s, President Ayub constituted a Commission on National Educational also known as Sharif Commission. The Commission recommended Urdu as the only medium of instruction from the sixth grade. Sindhis considered this as an affront and launched a movement against the recommendations of the Commission. Sindhi writers and intellectuals founded "Sindhi Language Society" in 1959 for protection of Sindhi language. A delegation of the Society went to present memorandum to the President on the status of Sindhi language; however, the meeting request was declined. Pakistan Writers' Guild also supported the movement of Sindhi language. In its meeting held on April 1, 1960 in Dacca, the "Languages and Script Committee" of the Guild recommended that since Sindhi is a developed language and since last 50 years has been the medium of instruction at high school level, it should be maintained as the medium of instruction at Secondary level.

An affirmative action was taken through Sindhi Language Act adopted by Sindh Assembly on July 7, 1972. The Act restored the official status of Sindhi language along with Urdu as national language. Again urban leadership failed to demonstrate sanity and the legislation was termed as anti-Urdu language Act. Leading Urdu newspaper "Jang" fanned the flames of hatred by terming it the funeral of Urdu. It instigated violent riots in major towns of Sindh. The Act was not in fact against Urdu language; it only restored the original status of Sindhi language that it enjoyed at the time of the creation of Pakistan.

Sindhis, Punjabis, Pashtuns and Balochs have been demanding to make their languages as national languages of Pakistan but the demand has been falling on the deaf ears of the cultureless ruling elite of the country. In 2009, Sindhi Adabi Sangat, renowned cultural and literary organisation of Sindh, dispatched

100,000 post cards to the President of Pakistan demanding four major languages of Pakistan i.e. Sindhi, Punjabi, Pashto and Balochi to be given the status of national languages. Sindhi Language Authority also presented a separate memorandum of the same demand to the government. In 2010, leading literary organisations from all four provinces and Progressive Writers Association of Pakistan presented the same memorandum to the parliamentarians. In 2010, two-member parliament from Sindh presented two separate bills before the National Assembly demanding major languages of Pakistan to be declared national languages. Standing Committee of Law rejected one such bill without any plausible explanation. Struggle for recognition of Sindhi language is still going on. However, Sindhis have taken their own initiatives for promotion of Sindhi language rather than waiting for government response. Today, more than a dozen Sindhi newspapers are published with cumulative circulation close to one million copies. Eight Sindhi TV channels are aired by private entrepreneurs. Sindhi IT experts have developed Sindhi software, making it possible to use Sindhi on computer and internet. Each year more than a thousand books are published in Sindhi language. Sindhis have thus protected their language and culture against all odds.

Costs of Poor Planning

THE Planning Commission issued a startling analytical review of the public-sector development portfolio some time ago. The document is a testament to the systematic institutional decay witnessed in the planning of public-sector development.

The country's annual budget is normally defined by the 'three Ds': defence, debt servicing and development. Ideally, there

needs to be a balance between these expenditures but in Pakistan, the first two are sacred while the third is routinely compromised on account of a paucity of funds. During the 2010-11 period, the Public Sector Development Programme (PSDP) was fixed at Rs280bn. Subsequently, the foreseen revenue shortfall curtailed it by Rs100bn.

The report acknowledges the burgeoning PSDP development deficit and reveals that the current throw-forward has reached the staggering sum of Rs3.1tr with over 1,800 crawling projects. Logically, it would require Rs600bn a year over the next five years if even an elusive moratorium on new projects is applied. If the current size of the federal PSDP is taken as a benchmark, the time lag would be 15 years — not accounting for project delays and increased costs.

PSDP projects are normally comprised of four mains sectors: infrastructure (energy, railroads, ports, roads, etc), social development (education, health, water, etc), balanced development (special programmes for less developed areas) and production (agriculture, industry and minerals, etc). The current throw-forward pertains predominantly to projects concerning infrastructure: some 409 projects are buried under a crippling future estimate of Rs2.4tr against the paltry allocation of Rs135bn under the previous PSDP. This is followed by the social sector with 1,227 projects costing Rs850bn having a throw-forward of Rs0.58tr.

Within projects related to infrastructure, almost half of the throw-forward is dedicated to the power and energy sectors. A throw-forward analysis in the social sector shows health as a major victim, with an estimated 25 per cent share in the deficit.

Education and higher education are the other major victims.

Ironically, the social sector is a vehicle to achieve key human development targets under the Millennium Development Goals (MDGs). The social sector has more than 1,200 projects in its portfolio, which accounts for one-fifth of the overall throw-forward.

The analysis identifies five key reasons for the debilitating throw-forward. It includes the approval of provincial projects without due consideration, frequent cuts in the PSDP due to resource crunches, weak feasibilities, cost overrun and ignoring public-private partnerships. Yet this report is nothing but a confession of sins, lacking any avenue of atonement. While the document brings valuable facts to light, it skirts around the institutional reasons for this state of affairs.

The Planning Commission is charged with the stewardship of the planning process, the sanctity of which it is mandated to safeguard. Poor appraisal processes that succumb to political pressures, the haemorrhaging of professional and qualified human resources and indecent haste in the project approval process have plagued the public-sector planning process. This has become particularly evident in recent years: the volume of throw-forward doubled within the last five years. Politicians alone could not have done this without the collusion of the planning wizards.

Regardless, the situation does not reflect well on a dispensation which has yet to demonstrate better sense in delivering development benefits to the citizens. In its good years, project appraisal would take two months. The length of this process has, by now, shrunk to a few hours with hardly any critical appraisal taking place.

The Planning Commission lacks the professional will and competence to shield the planning process from the demands

made by the project's proponents. Governments announce and inaugurate projects to gain political mileage while higher-level government offices do not understand the value of and intricacies involved in the development process. With a view to gaining popularity and securing their vote bank, they make generous announcements and often gloss over procedural imperatives.

The role of the Planning Commission is to protect the planning process; yet this is flagrantly compromised to appease the people at the helm of affairs. The Central Development Working Party has itself vitiated planning prerequisites by approving projects without the mandatory scrutiny. Equity in benefits determines the political economy of development; this is very often simply ignored. Certain favoured constituencies receive huge amounts of funding without justification, which eventually puts society under heavy strain.

Likewise, processing the PC-1 without a proper PC-2 is common. The PC-2 is a prequel to PC-1 that has to establish the feasibility of any project. A glaring example of this is the Mangla dam-raising project. The resettlement aspect was ignored at the planning stage. Now that the structure is complete, the project is dogged by the resettlement issue since the costs have doubled from the initial estimates.

Had there been a rigorous appraisal process in place, such anomalies could have been avoided.

The report depicting unsustainable throw-forward was issued in March. Yet in its previous quarterly meeting, the executive committee of the National Economic Council approved of new projects worth Rs300bn. If this remains the trend, it may approve projects costing more than a trillion rupees each year, further fattening the mammoth throw-forward.

Both politicians and planners must demonstrate some sanity to align development with the greater goal of sustainability.

Thrusting more projects on the slim purse of public-sector development will render the whole ineffective. The sector has already touched rock bottom and can ill afford further erosion.

The News -September 22, 2011

Lacklustre Performance

PAKISTAN has slipped 20 rungs on the ladder of human development this year. Last year, Pakistan was ranked 125th on the Human Development Index (HDI) and was in the category of 'medium human development'.

This year Pakistan has been ranked 145 and thus falls in the category of 'low human development' countries. The latest annual Human Development Report of UNDP has ranked 187 countries on the HDI. Among the Saarc countries, Pakistan has performed better than Bangladesh (146), Afghanistan (172) and Nepal (157), whereas India (134), Sri Lanka (97), Bhutan (141) and the Maldives (109) have outshone Pakistan. No South Asian country is ranked in the 'very high human development' category though nearby Iran ranking at 88 falls in the category of 'high human development'. Sri Lanka and the Maldives are the only two Saarc countries ranked among the countries in the 'medium human development' category.

HDI is a composite index made up of an assortment of indicators including gender inequality, poverty, environmental sustainability, impact of natural disasters, education, health, population and the economy. Each country is ranked on these

indicators. A cursory look at a few indicators and comparison with closely ranked Asian countries would help in understanding Pakistan's overall performance.

While an analysis of HDI rankings since 1990 shows that Pakistan has steadily improved on its scale, its annual average HDI growth is marginal at 1.12 per cent. Bangladesh, India and even Afghanistan have marked faster strides on this with annual average HDI growth rates of 1.69, 1.38 and 2.32 per cent respectively. This clearly shows that successive governments in Pakistan have not accorded due importance to human development; certainly not in comparison with regional countries.

On the 'gender inequality index', female participation in secondary education and the labour force is lower in Pakistan compared to India and Bangladesh. In fact, the latter country has higher female participation in secondary education i.e. 30.8 compared to Pakistan's 23.5 and India's 26.6 per cent. Female participation in the labour force is also higher in Bangladesh with 58.7 compared to India's 32.8 and Pakistan's dismally low 23.5 per cent. Even Afghanistan with all its socio-political odds demonstrated an impressive 33.1 per cent female participation in the labour force.

Iran, which is often derided as a conservative society, has a 39 per cent female population that has benefited from secondary education and 31.9 per cent female participation in the labour force. This indicates the gravity of gender discrimination in Pakistan. Both education and participation in the labour force are key indicators of women's empowerment, social emancipation and political contribution.

On the 'poverty index', Pakistan has a smaller percentage of people living in severe poverty (27.4 per cent) compared to India (28.6 per cent) but Bangladesh fares slightly better at 26.2 per cent. Given that Bangladesh is a relatively younger economy

and a chronic victim of disasters, its performance on this account is appreciable.

Environmental sustainability is another indicator of Pakistan's dreary performance. Pakistan's land under forest cover is a mere 2.3 per cent against Bangladesh's 11.1 and India's 22.9 per cent. The rate of deforestation in Pakistan is alarming.

According to some estimates, the country loses some 66,718 acres of forest cover annually. In the areas of core human development i.e. water quality, education and health, Pakistan's performance is a major reason behind its overall dismal ranking. On all three counts, Pakistan's performance on several key sub indicators is the lowest in the region.

For example, only 55 per cent of population in the country is satisfied with the quality of water. In Bangladesh, the percentage is 69.5, in Afghanistan 60.7 and in India 62.7. In the Saarc region, the mortality rate of under-five years children at 87 per 1,000 live births is the highest in Pakistan compared to India's 66, Nepal's 48, Sri Lanka's 15, the Maldives' 13, Bhutan's 79 and Bangladesh's 52. The only exception is Afghanistan where this figure is 199 for understandable reasons.

Resource allocation on health and education is a signature indicator to fathom the state's commitment to human development. On these, Pakistan fares preposterously low, in fact the lowest in the Saarc countries.

Public expenditure on education and health as percentage of GDP in Pakistan is 2.6 per cent. India (4.2 per cent), Sri Lanka (four per cent), Bangladesh (3.4 per cent), Bhutan (5.5 per cent), Nepal (5.8 per cent), Afghanistan (7.4 per cent) and the Maldives (eight per cent) are spending higher on education and health as a percentage of their GDPs. As a result of this, Pakistan

today has the second highest number of out-of-school children in the world and the infant mortality rate as indicated earlier is also deplorable.

The 2011 HDI shows that South Asia continues to be the cradle of human deprivation. Chronic conflicts, egregious governance, unstable democracies, malevolent natural disasters, rampant corruption, large population and a fast-depleting natural resource base are some of the maladies that preclude South Asia's growth on the human development indicators.

Pakistan with perpetuating dictatorial regimes, punctuated by impressive spells of economic growth has yet to show its citizens political commitment. The country with its enormous human and natural capital possesses great potential for human development. However, misplaced priorities and weak political institutions have deprived the people of opportunities of growth and well-being. The country needs to veer its focus from illusive border security to the greater objective of human security by investing in its people.

DAWN-December 13, 2011

Global Capital, Development and Livelihood of the Poor

While investment avenues in the developed world are almost saturated, global capital is now exploring new markets. The developing world offers fertile grounds for international investors.

The developing world has enormous natural resources which largely remain unexploited due to lack of technology, capital

and human resource. The law enforcement is weak and governments are inefficient and corrupt.

The laws including environmental, human and consumer rights are easy to flout. Civil society, consumer rights groups and political organisations are not strong enough to defend local interests. Higher profits can be generated due to cheap labour, energy and raw material.

Often foreign direct investment does not benefit the poor while global capital continues to flourish. Out of 100 largest economies in the world, 51 are global corporations not countries, reveals the Corporate Watch Report of 2000.

According to the 11th Annual World Wealth Report released on June 27, 2007 "globally the number of people possessing $1 million or more in investible assets rose 8.3 per cent in 2006 and reached to$ 9.5 million. And the wealth of the world's rich increased 11.4 per cent to $37.2 trillion last year. Interestingly bulk of this amount found its way into real estate business which is oozing with unmatched profits. The global direct real estate transaction volumes reached $682 billion last year, up by 38 per cent from 2005.

Pakistan is also a point of attraction for global capital. Neighbouring countries are now exploring sea shores to invest their surplus capital. UAE-based real estate concerns are fast expanding their overseas investments. They have surplus capital earned through high scale commercial ventures and foreign investment. The past three decades have witnessed amazing real estate development in UAE especially in Dubai which has become a hub of commercial activities. Investors from all over the world are pouring money into Dubai's business ventures.

This has given tremendous boost to real estate activity. There is no dearth of capital in UAE. A booming economy and high oil revenues helped create 9,100 new millionaires (in dollars) in the UAE only last year, taking their total to 68,100 in UAE. Likewise Saudi millionaires grew to 89,600 in the same year.

Emaar, Dubai World, Limitless and Dubai Islamic Bank have surfaced as major players in Pakistani real estate business. Urban areas have witnessed unprecedented boom in construction over the recent years. FDI in construction has increased from only $12.8 million in 2001-02 to $1,937 million in 2005-06. Almost all of this development is being done in disregard of environmental and human rights.

In this era of markets, poor-rich divide is increasing at dramatic pace and economists are covering up disparities presenting "average" and "per capita" growth. Mathematically, one should be comfortable if one's foot is placed in hundred degree boiling water and the other one in ice. Hence world should be in comfort if 90 per cent population has 10 percent resources and 10 per cent occupy remaining 90 per cent, thus making the equation perfectly balanced. The fundamental question is, if the investments bring "development", they also create imbalances not natural equilibriums. The real estate investment targets land, which is the primary source of food for both rural and urban poor, whereas in fast expanding cities the land is precious source of shelter for urban poor. Cities in Pakistan have been expanding at alarming rate and eating productive agricultural land.

Taking example of Karachi , which expanded from 233 sq km in 1947 to 3,000 sq km in 1959, is bursting with seam. All this expansion was done by covering the cultivated land with concrete. The trend is not too different in other big cities and smaller towns.

The poor draw their sustenance on natural endowment like land as they cannot compete with market capital. With every acre of land converted from grain to concrete, the poor is the only loser as land is the primary source of his food security. An acre of land can feed needy dozens of poor but it benefits only a handful of rich if converted into urban real estate.

Loss of agricultural land is pushing up rural unemployment. Since agricultural labour is not trained for urban trades, it cannot find its share in urban employment opportunities, created through real estate investments. While employment opportunities of real estate ventures are boasted by city managers, they do not mention more unemployment created due to land occupation.

The situation can be explained by two major investment ventures. In 1974, Pakistan Steel Mills was founded. About 18,660 acres of land were acquired from 500 land owners and 200 lease holders. About 15 villages were erased by the mills. These villages were rich in pastures, livestock and fisheries. Affectees were offered Re1 per square yard for owned land, Rs1,500 for a pacca house and Rs600-1000 for katcha house. But they were not compensated. The affectees approached the court, which decreed in their favour and new rates were announced but villagers were never paid.

Till 1974 some 25,000 regular and more than 4,000 temporary staff was employed in the mills. Displaced villagers were only 35 among them now reduced to 16 only. The Ministry of Production also issued a letter number PD/JSA/3076/79 on May 16,1979 promising employment for local villagers but it never happened. A number of industrial units are operating in the area, having more than 30,000 employees but hardly two dozen local villagers are among them.

Port Qasim Authority is another empire built on the bulldozed remains of coastal villages. The port was inaugurated in 1975. At that time 20,000 acres were acquired on coast and another 15,000 acres were acquired from Sindh government. The port demolished 35 villages from the map.

The Board of Revenue and the Port Qasim Authority signed an agreement on May 11, 1981 promising that all affectees will receive compensation and will be resettled before displacing them. However, only one village received some compensation and the remaining 34 never received any benefit.

From 1974 to 1990, the Port Authority employed 2,200 persons; only 79 were from the affected villages. Port Qasim ignored almost every agreement and instructions from Sindh government on local employment.

The authority acquired villages for port activities but now the same land is being allotted to private concerns for commercial purposes. Hundreds of production units are operating on the same land but villagers never received any benefit of this development on their land. Now Port Qasim is bent upon selling two islands Dingi and Bundaar to deprive fishing communities from their remaining sources of livelihood.

The list of examples is virtually unending. Lyari Expressway is a recent addition to it, which displaced about 25,000 families. The Diamond Bar Island City and Sugarland City are the upcoming episodes. Fishing communities on the Karachi coast especially at Hawksbay are forecasting a human disaster in waiting.

Interestingly, all this is being under the banner of 'development' in the centuries old villages of fishing communities, which were not considered eligible for basic human development over six decades. These villages are part of the metropolitan city but they do not have facilities like drinking water and primary health.

A country with more than 4.5 million children out of school and 10 per cent dying at infancy deserves investments and strategies for human development and not for real estate development.

http://www.dawn.com/2007/12/24/ebr8.htm
Dawn-24th Dec 07

Millennium Development Goals: A Distant Dream

THE Planning Commission of Pakistan recently released the fourth national report on progress on the Millennium Development Goals (MDG).

This document has been released after a long wait, with the last one appearing for 2006. While it is informative in terms of the dismal progress on almost all major MDG indicators, it conceals inter-provincial and intra-provincial disparities that were presented in the last report.

The period covered by the latest reports — 2006 to present — was marked by terrorist attacks, anti-terrorist operations and the displacement of several thousand people. Further, these years also saw a global recession, nose-diving foreign direct investment in the country (from $5.13bn in 2006-07 to $2.21bn in 2009-10), the GDP growth going into a tailspin (from seven per cent in 2006-07 to 2.1 per cent in 2008-09) and skyrocketing inflation (from 7.9 per cent in 2006-07 to 13.1 per cent in 2008-09). This was also a period of tumultuous political transition. Now, Pakistan is poised to miss almost all the MDG targets.

The primary MDG relates to eradicating extreme poverty and hunger. The consumer-based economic growth modelof the Musharraf era was presented as the Pakistani economy`s golden period. However, it is riddled with sharply rising economic inequalities. A higher GDP growth rate during the Musharraf era created a smokescreen of wellbeing. However, there is strong evidence that economic disparities actually increased.

The Musharraf government conjured up figures to claim that poverty had declined from 34.5 per cent in 2001-02 to 22.3 per cent in 2005-06, with a too-good-to-be-true 12.3 per cent decline in just five years. These figures were disputed by the then chief economist. And even if this miracle is postulated, the recession in the subsequent years and the recent floods have pushed more people below the poverty line. Halving poverty from 26 per cent in 1990 to 13 per cent by 2015 appears next to impossible.

The second MDG was to achieve universal primary education. Pakistan has the lowest adult literacy rate in the region and is second only to Nigeria in out-of-school children. The current net enrolment rate is less than 60 per cent, which implies that the target of 100 per cent enrolment requires a more than 40 per cent points` increase by 2015. Given that during the past 10 years Pakistan barely achieved 16 per cent points, it is unrealistic to hope for target achievement. Furthermore, nearly half the enrolled students do not complete their education and achieving survival rate of 88 per cent in the years remaining is practically impossible.

Pakistan was supposed to establish gender parity at the primary and secondary education levels by 2005. This target has already been missed. True, there has been a steady improvement; for example the proportion of 15-24 year old literate females as

compared to boys has increased from 0.51 in 1990-91 to 0.78 in 2008-09. Yet achieving parity needs further serious effort. Women`s representation in legislative forums has increased tremendously, but the journey from representation to real empowerment will have to traverse rocky terrain.

The mortality rate of children under five has declined from 117 per 1,000 live births in 1990-91 to 94 per 1,000 in 2006-07, against an MDG target of 52 by 2015. The infant mortality rate declined from 102 to 75 per 1,000 live births between 1990 and 2007, against the MDG target of 65. The proportion of fully immunized children of 12 to 23 months in age also indicates a stagnant trend. It increased marginally from 75 per cent in 1990-91 to 78 per cent in 2008-09, against the target of over 90 per cent by 2015.

The number of mothers dying due to pregnancy and delivery-related complications per 100,000 live births has declined significantly from 533 in 1990-91 to 276 in 2006-07. However, the rate is still much higher than the target of 140 by 2015. Similarly, the proportion of births attended by skilled birth attendants increased from 18 per cent in 1990-91 to 41 per cent in 2008-09. Yet it remains much lower than the targeted 90 per cent by 2015. Pakistan`s current total fertility rate is 3.75 and that is to be lowered to 2.1 by 2015.

Meanwhile, several reports by independent sources suggest that Pakistan does not put in the desired efforts towards environmental sustainability. The forest cover increased marginally from 4.8 per cent of the land mass in 1990-91 to 5.02 per cent in 2008-09. The MDG target is six per cent. Conservation organisations consider even these figures exaggerated.

Pakistan has, however, surpassed the target of CNG-run vehicles from a targeted 920,000 to 2,220,000. Yet the population with sustainable access to safe drinking water is at 65 per cent against the targeted 93 per cent. The quality of this drinking water is also a moot question. Similarly, access to sanitation is enjoyed by only 63 per cent against the MDG target of 90 per cent.

Pakistan is a long way from achieving the Millennium Development Goals. More than monetary resources, what is required is the political will to prioritise human development in the country. In its current shape, Pakistan is the embodiment of a security state where human development barely attracts attention. N

An analysis of the national budgets reveals how the wellbeing of the citizens has been ignored. Pakistan`s first national budget of 1948 allocated more than 70 per cent of the total resources to defence; this lunacy was never reversed. Even in today`s world of knowledge-based societies our allocation for education and health is shamefully the lowest in the region.

Daily Dawn, 1st Dec 2010

Social Sector: A Victim of Neglect and Bad Management

Social Sector has remained the most neglected sector in the country. Riddled with bad governance, the country has been ignoring social sector ever since it dawned on the world map. Carrying a history of wrong choices and inappropriate priorities, the country has reached at a stage where poverty has become

integral part of lives for a vast majority of citizens. An analysis of the budget figures from 1947 to 2005, show that development has been among the lowest recipients of budgets, whereas combined expenditure on defense and debt servicing has been eating away the larger part of pie.

Budget Head	Total Amount	%age allocation
Total Budget	10194011	
Debt Repayment	3506314	34.5
Defense	2351890	23
Development	2105105	20.5

The share of social sector out of meager development budget can be gauged from the fact that during 1990-91 to 2004-05 average share of health as percent of GNP was 0.68 and that of education was 1.99 percent. Whereas the share of Defense expenditure remained 4.6 percent during the same period. As a result of this trend Pakistan is ranked at 9th number among 117 market economies in terms of percentage of expenditure allocated to defence. Among 34 poorest economies the country is ranked 17th in education and the last i.e. 34th in health in terms of allocations against total expenditure.

Education, Health, Drinking water & Sanitation are the problems of every one, yet they find lowest attention on the priority order of our policy makers. All indicators of these sectors present a grim look and place the country among the worst in the developing world.

Multilateral donors have been extending various loans to boost social sector allocations, however wrong choices of decision makers, poor monitoring and regulation by donors and absence of vigilant civil society has resulted in less than desired outcomes. On one hand human development indicators could not show

significant improvement and on the other hand country became over burdened with new loans. Unfortunately foreign add in the shape of loans could not deliver the desired mainly because donors are less concerned with the effective design and implementation of the projects since their priority is the issue loans and receive interest.

Asian Development Bank has remained the second largest donor after The World Bank. The Bank conducted an evaluation of its social sector lending of 20 years i.e. from 19985 to 2004. The report titled "Sector Assistance Program Evaluation for the Social Sectors in Pakistan" confirms that huge loans could not bring impact matching the magnitude of amounts put in.

These were the years of high political turbulence of the country and it witnessed15 administrations (including caretaker governments) during the years. The frequent change of hands would have obviously left negative impact on continuity of policies and service delivery.

ADB approved $11.9 billion of public sector loans for Pakistan over the 20-year period 1985–2004. At $1.9 billion, social sector approvals were 16% of the total. During the period, ADB approved 28 social sector projects —10 education ($470 million), 5 health and population ($198 million), 4 urban development and housing ($232 million), 5 water supply and sanitation ($323 million), and 4 multisector ($670 million).

The evaluation results paint a depressing picture that out of 24 social sector projects assessed, only 8% were judged to be successful and none was highly successful, with one third declared unsuccessful (33%) and 58% partly successful. From a total approved amount of $1.9 billion for social sector operations, about $0.9 billion has been disbursed (excluding

disbursements from approvals prior to 1985) and the remaining $1 billion being either cancelled or not yet disbursed.

The evaluation report identifies a list of causes of such poor performance of social sector loans. Some of them are as under.

There has been a general lack of meaningful government and other stakeholder involvement in project design—the involvement that occurred was insufficient to generate ownership and commitment. This lack of engagement during design contributed • to delays in effectiveness (senior government officials only focus on the project after its approval by ADB) and, ultimately, a failure to fully achieve objectives. All projects have suffered implementation delays—this is, in part, a consequence of the lack of Government engagement during design. That delayed implementation continues to be the norm indicates that this reality is not being addressed in project design.

There is a lack of analytical underpinning and problem analysis for projects evident in project design documents, which results in projects not always addressing the real causes of the identified problems, or not addressing them in a sufficiently comprehensive manner to achieve desired results.

Lessons from previous projects have not been fully incorporated—they may be acknowledged, but significant design changes or innovations to avoid past problems are usually not made. Follow-on projects are usually designed without an evaluation of the predecessor project, despite the obvious partial success of these in many cases. There is a lack of clarity regarding the role of ADB in project administration vis-àvis that of the Government, with consequent unclear accountability.

There is no meaningful external funding agency coordination in education sector projects beyond avoidance of the worst duplication of effort. There is a lack of clarity among all parties about what donor coordination means in terms of outcomes. True coordination can only come from the Government.

Successive projects were funded to increase the number of classrooms and to train teachers. However, the existence of hiring bans made it difficult, if not impossible, to increase the overall number of teachers. Consequently, the new facilities almost always operate well below capacity.

Under the Primary Education (Girls) Sector Project, 80% of the funds for physical infrastructure were used but only 28% of those allocated for institutional development.

With little variation similar reasons have been identified as responsible for the poor performance. Interestingly institutions like World Bank and ADB approve project designs and a large of amount is often pocketed by their consultants yet they do not take responsibility of design failures. The long process of project approval provides ample opportunity to vet all the project designs. Also all operational policies of the lending agencies are strictly ensured by the implementing agencies. During the project life several missions of lending agencies also do visit projects. Given these realities one can not simply blame government departments for all failures. Some other very important factors have also been highlighted where external agencies truly have very little control and these factors are critical for project performance.

Delay in project completion, which also results in cost over run is a major cause of less than desired delivery of social sector projects. According to ADB report the average extension for all sectors in

Pakistan was 2.3 years, the worst of any developing member country. Social sector loans performed slightly better-yet not satisfactory-had an average extension of 2.2 years. Of the 16 social sector loans approved since 1985 that have closed, all but one required one or more extensions to the loan closing date. The average number of extensions was 2.7 with an average total time of extension of 2.8 years (2.2 years for loans outside the social sector), which represents a 48% time overrun on average.

Part of the reason loan closing dates need to be extended is the very long time required for approved loans to become effective. Tedious process of project approval and post-approval activities always makes projects victim of delayed start. Across all sectors, the average time for loans that became effective over 1985–2004 was 249 days. ADB expects that loans will become effective in 90 days—the actual time taken for education, health and population, and water supply and sanitation loans were 333, 443, and 295 days, respectively.

Rampant corruption of all sorts is another major cause of project failures and under-performance. Bureaucracy and other vested interested have invented highly sophisticated forms of corruption. Lack of transparency and absence of institutional accountability has made this country a heaven for money makers at the cost of development of poor citizens.

The ADB report refers to one project where evaluation did explicitly acknowledge corruption was the Middle Schools Project. The Project Completion Report (PCR) notes the project suffered from financial mismanagement comprising an embezzlement of $1.03 million. In the same project, the cash allowance stipend program was suspended because of "doubts about the existence of beneficiaries and the recipients of payments made." The PCR also reported problems with civil

works with recently constructed schools "already looking dilapidated with cracks in walls and ceilings, broken flooring pitted with holes, and grounds left rough and undeveloped." About 70% of respondents who interacted with education institutions indicated that irregular payments were necessary to gain admission.

According to ADB report the informants in the health sector indicated that commission payments for securing contracts were usually of the order of 20–35% although this was a general observation not linked to any project in particular. Corruption also affects the public provision of social services. Of patients visiting hospitals, 65% reported irregular admissions and 96% of those who were admitted said they were victims of corruption. Hospital staff were identified as the key facilitators of corruption by 65% of the users and direct extortion was reported in 60% of the total cases of corruption. Lack of accountability and monopoly power were quoted as key contributing factors.

These examples are merely few drops out of ocean of corruption in the country. This is very unfortunate that social sector which receives a very small portion of resources is victim of endless list of social evils. With this state of affairs achieving Millennium Development Goals on ground seems a remote possibility, no matter how rosy picture is painted in papers and speeches.

Conflict on Right over Natural Resources

Not too distant past, demanding provincial autonomy was not less than a sin and today with the change of winds government is itself championing the consultations on extending more rights

to provinces. All such good initiatives would always remain superficial unless priority right of local communities is not recognized over natural resources of their areas.

According to Constitution of 1973, Oil and Gas has been made federal subject. The two precious resources are found in provinces mostly in Sindh and Balochistan but the decision making is in hands of Federal Ministry of Petroleum and Natural Resources. The Directorate General of Petroleum Concessions is authorized to issue exploration licenses under Petroleum Concession Agreements. Provinces are not consulted at any stage during the whole process. Federal Government collects all revenues earned from the business and provinces get 12.5 percent royalty from the federal government. Sindh and Balochistan are the major producers of oil and gas and are sadly the least beneficiaries of the wealth they generate. Petroleum policy does not guarantee and share from the provincial royalties to go directly into the tahseels/union councils from where oil and gas are being drilled out. According some media reports Prime Minister while presiding over a meeting on Petroleum Policy-2007 has said that the local bodies of the oil and gas producing areas should also receive 2.5 percent royalty. However it is not yet clear if this share will come out of 12.5 percent provincial royalty or federation would set new history of sacrifice by giving out this paltry share from their hefty 87.5 percent incomes.

Contemporary history suggests a fair deal with communities of the wealth generating areas, ignoring which brews unrest, conflicts and damage to national integration. Dera Bugti outbreak should have been enough to learn but sadly temporary suppression of unrest with gun power has been considered as final solution. Wise people know very well that

Dera Bugti is still smoldering and can result new flames at any instance.

A classical example of Nigeria would be pertinent to cite here. A close neighbor on transparency list, Nigeria is reeling under armed insurgency in Niger Delta where more than a decade old up rise by local tribes have made life miserable for Shell and other foreign exploration companies. Nigeria became member of OPEC in 1971 and currently earns 95 percent of its foreign exchange through oil production. Niger Delta produces 2.5 million barrel oil per day but the communities living in Niger Delta are among the most marginalized in the country. Under the constitution, oil and gas is federal subject like Pakistan. Shell is the biggest oil producing foreign concern in Nigeria accounting for about 60 percent of local oil production. Shell Petroleum Development Company has a joint venture with the state run Nigerian National Petroleum Corporation. Ogoni is the major local tribe which is up at arms with oil producing companies. The Ogoni are a people of approximately 500 000, who live in Ogoni, a region in Rivers State, Nigeria. The region of Ogoni only has an area of 650 square kilometers, indicating to a very high population density. Ogonies claim that Shell has not only destroyed ecology of delta but also deprived local communities from benefits of oil production. According to local reports Shell has so far earned over 30 billion dollars from the Ogoni area.

The environment effects of having more than 100 oil wells (most of which are Shell owned) in Ogoni territory have been severe. Between 1976 and 1991, almost 3000 seperate oil spills, averaging 700 barrels each, occurred in the Niger delta. Response to oil spills is slow, and often very damaging. Oil spills has not only degraded agricultural land but also rendered aquifer unfit for human consumption. Gas flares are blamed as source of acid rains in the area causing severe damage to

natural life in the delta. Ogonies founded MOSOP, the Movement for the Survival of Ogoni People, in 1992, under the leadership of the Nigerian author, Ken Saro-Wiwa. The struggle of MOSP is best described by Saro-Wiwa: "The Ogoni people have now decided to make a last ditch stand against the government and against Shell that have ripped them off for the last 35 years." On 4th of January, 1993, 300 000 Ogoni staged a peaceful mass protest against Shell Oil and the environmental destruction of Ogoni land. The situation in Ogoni soon deteriorated. As a response to the beating of a Shell worker in January 1993, Shell withdrew its staff from Ogoni. On the 30th of April, 10 000 Ogoni people protested at Nonwa against the construction of a pipeline by the American contracting firm Willbros on behalf of Shell. They were fired on by Nigerian soldiers, wounding 10 people. Saro-Wiwa was subjected to continual military harassment, including being held at Port Harcourt International Airport for 16 hours without charge.

In November of 1993, a coup staged by Gen. Sani Abacha led to the resignation of interim President Ernest Shonekan. However it did not help improving situation. By the end of January 1994, the eight major oil companies estimate their losses during 1993 at 200 million dollars, due to "unfavorable conditions in the areas of operation". They called for urgent measures to combat the situation. There is considerable evidence that Shell colluded with the Nigerian government in attacks on Ogoni people. As massive violence failed to stop Ogoni protests, Sani Abacha targeted Ogoni leaders. In April 1994, 15 Ogoni leaders, including Ken Saro-Wiwa's brother, Dr. Owens Wiwa, were arrested. While military operations against the Ogoni continued. Ken Saro-Wiwa was seized from his home by armed forces on the 22nd of May. On the 25th of May, Saro-Wiwa managed to smuggle out a statement from the Bori Military Camp where he was being held without charges against him. He rejected Col.

Komo's allegations that he was involved in the murder of four Ogoni leaders. Saro-Wiwa was held without charge for a number of months, before he was officially charged with the murder. Ken's trial was marked with irregularities, including the failure of the state to present their evidence against Saro-Wiwa. As a result of this, Ken Saro-Wiwa's defence team withdrew late in June. On October 31, 1995, Ken Saro Wiwa was sentenced to death, along with eight of his co-trialists. The sentence immediately drew an international outcry, which went unheard by Nigerian government. Ken Saro Wiwa was executed on a hastily built gallows in Port Harcourt on the morning of the 10th of November. This did not stop Ogoni struggle, which has been taken over now by hard liners under the banner of "Moment for Emancipation of Niger Delta (MEND). The hardliners have announced armed struggle for Ogoni's rights and in recent months several workers of Shell have been kidnapped forcing Shell to pack its luggage.

Learning from Niger Delta has many parallels with conditions in Pakistan. Communities living in oil and gas producing areas of Sindh and Balochistan are facing socio-environmental injustice akin to Ogonies of Niger Delta.

Balochistan has been catering country's energy needs since 5 decades with getting very little in return. Sui gas field was discovered in 1951 and the first city in the province luckiest enough to get gas facility was Quetta after 25 years. Today after 56 years of the discovery, the province has only 3.4 percent gas users in the country. Not only that the province did not receive gas facility being pumped from their land, the Balochistan people were also kept deprived of employment opportunities resulting from gas production and distribution. According to statistics, Pakistan Petroleum Limited (which operates Sui gas field) has only 9.7 percent and 67 percent employees from

Balochistan in management and non-management cadres respectively. Similarly gas distribution company Sui Southern Gas Company (SSGC) has only 5.8 and 8.2 percent employees from Balochistan in the two cadres. The organization responsible for development of oil and gas reserves OGDC has equally poor representation of employees from Balochistan, with 3 and 10.5 percent in both cadres. Depriving them from benefits of their resources, the province has become a victim of permanent poverty. State of human development can be gauged from the Human Development Report of UNDP issued in 2003. The province had 12 districts among the last 30 districts ranked in the country on the basis of Human Development Index. Whereas the top 30 districts on HD Index included only 3 from Balochistan. A research conducted by Social Policy and Development Centre (SPDC) in 2001 revealed that Balochistan has 24 out 57 of the most deprived districts in the country. According to the research 88 percent population of the province was under high deprivation category. What would the provincial autonomy deliver to Balochistan, if they don't get right over their gas reserves and the only port in the province?

Sindh is very rich in natural resources specially the country's richest oil and gas deposits. According to official documents Sindh provides about 70 percent share in taxes and unaccounted non-tax revenues. On both eastern and western sandy and hilly strips of Sindh, several productive oil and gas fields are producing oil, gas and coal. According to statistics of 2005, Sindh has produced 65 percent oil, 70 percent gas and 43 percent coal of local production. In 2006 Sindh produced 20,369,549 million cubic feet (MCFT) of gas, which was 70% of the local production. However Sindh consumed only 10,192,560 MCFT, which is barely 50% of its production. In 2002-2003 Sindh produced 15.33 million barrels of oil, which amounts to about 60 billion rupees. However this richness of resources has

resulted in very little benefit to Sindh. Ex-Minister for Petroleum Mr. Amanullah Jadoon while replying a question in National Assembly on 14th April 2006 revealed that out of 11,613 jobs in OGDC, SSGC and SNGPL, Sindh received only 3,613 jobs (including 1,940 from urban areas), Balochistan received 353 jobs, whereas Punjab got 5,454 jobs. Worse than that, oil and gas producing areas have been kept completely under developed. Major oil and gas producing areas such as Badeen, Nara desert and its northward extension (Khairpur, Sukkur and Ghotki districts), Kohistan belt (Jamshoro, Dadu, Larkana/Qambar districts) and parts of Sanghar are completely under developed and communities surrounding the oil and gas field live in primitive ages. The aforementioned HDI of UNDP placed Badeen, the major oil producing district of the country at 60th number out of 91 districts in country. Likewise only 3 districts of Sindh (including Karachi and Hyderabad) found place in top thirty districts of country on HDI. The same report placed Rural Sindh lowest among all urban and rural areas of all provinces ranked on HD Index; even lower than rural Balochistan. SPDC's annual report of 2001 "Social Development in Pakistan-Growth, Inequity and Poverty" mentions that 50 percent of districts of Sindh (all from rural Sindh) were in high deprivation category and 49% of rural population was under hi[illegible] deprivation.

This is high time that federation should consider recognizing rights of provinces over their natural resources and make them major beneficiary of the wealth they generate. This will eventually lead to greater inter-provincial harmony and make country a truly federal state.

Gloomy Picture of Development in Sindh

A recently released report of the World Bank "Securing Sindh's Future: The Prospects and Challenges Ahead" (Report No. 35001-PK) has revealed startling facts about state of the governance and socio-economic wellbeing of Sindh, particularly in rural areas. The whole document is littered with hard evidences of depressing facts of development in the province, which has been an all time major contributor of the national economy. Both at provincial and federal level overall governance of Sindh seems to be the single largest factor of socio-economic degradation of Sindh. This is tragic that a province which has been contributing enormously in the economic health of country is suffering from negative growth in almost every development indicator, even worst than that at the time of independence.

Sindh had 40% higher per capita income than Punjab and nearly 55% higher than the rest of country. It gradually started declining in early 70s and touched to only 36% higher in1991-92 and further fell to barely 16% by 2004-05. This downslide of incomes has resulted in growth of poverty. During the last decade per capita income rise in Punjab and NWFP was recorded as 1.6 and 2.3 percent, whereas Sindh registered only 0.9 percent increase. It is worth mentioning here that a sizable number of people from these two provinces are settled in Sindh. This impact has also been experienced at household level. According to the World Bank estimates 81% of households in Sindh did not experience any improvement in their economic situation as compared to the previous year, as against 72% in the rest of country.

Poor growth of job market due to absence of vibrant industrial sector and low performing agriculture sector owing to shortage of water is a source of consistent pressure on per capita incomes. Sindh's natural population growth and influx from other parts of country and the world are major threat for social wellbeing of masses. According to estimates about 600,000 people will be annually added to the job pool for next 10 years, whereas the long term job creation capacity of the province is around 350,000 annually baring exceptional years of high growth, when the figure may rise to 500,000. Thus under normal conditions Sindh is likely to have an army of 1.0 to 2.5 million jobless people each year. In 2004-05 nearly 610,000 persons are unemployed in Sindh. Even if we take an optimistic scenario yet at least 1.6 million jobless people will be roaming around over next 10 years. The consequences of which can be gauged without any deal of complicated mathematics. To avoid this alarming threat Sindh needs to have a sober economy growing at a rate of 7-8 percent for the coming years. It is pertinent to mention here that people from other parts of country and the world are a major cause of over burdened economy. This report also acknowledges the fact that during the decades of 80s and 90s Karachi's population increased by more than the whole population of Lahore, obviously not all locally born. This is unfortunate that no one counts the burden on economy owing to this in-migration. An Additional Chief Secretary (Development) of Sindh is on record saying that every additional migrant costs Sindh Rs. 32,000 per year in terms of water, education, health and other facilities. However their contribution in growing unemployment and poverty of locals is not fully established.

Rural Sindh has been the worst hit due to persistent drought partly natural and partly due to artificially created shortage of canal water owing to bad politics and management of water in

country. Almost 14 out of 17.8 million current population of Sindh live in rural parts, mainly dependent on Agriculture. This has been the flagship sector of Sindh's economy till 80s. However the bad polices coupled by drought took its toll. The table.1 shows clear trend of decline in the growth of major crops.

Tbale.1 Trend of growth in important crops of Sindh

Crop	Growth (%)	
	1985/86-1999/00	1999/00-2003/04
Wheat	2	- 7
Rice	3	- 10
Cotton	5	0
Sugarcane	5	2
Pulses	1	- 7
Vegetables	5	- 3
Fruits	3	1

The situation is not too different in other sectors as well. Bad governance and policies have resulted in negative growth in almost every sector of economy including the ones where Sindh had been on fore front. The only sector registered significant growth is mining and quarrying (which is mainly located in rural Sindh but hardly gives any benefit to the local communities). A comparison of growth in various sectors of economy in 90s and the current decade substantiates the same fact in table. 2

Table. 2 Trend of growth in various sectors of economy in Sindh

Sector	Average	Growth Rate (%)	Net growth
	1991-2000	2001-2005	
Aggregate GDP	3.6	2.3	- 1.3
Finance and Insurance	2.8	2.5	- 0.3
Wholesale & retail trade	2.9	2.9	0
Transport, storage and communication	2.8	2.0	- 0.8
Mining and Quarrying	2.7	7.4	4.7
Large Scale Manufacturing	2.6	4.6	- 2.0
Agriculture	5.3	- 0.8	- 6.1

As a result of this Sindh's share in the overall national economy also fell in almost all sectors.

While discussing the socio-economic indictors of Sindh a major factor of Karachi always jacks up the figures. For example poverty in Sindh goes underestimated due to indicators of Karachi where a sizable number of people from other provinces reside and are much well of than the local population. For example Household Income and Expenditure Survey-2001 (HIES) shows 36.7% poverty in Sindh. If figures of Karachi are excluded the number touches to an alarming height of 48.4%. Likewise urban centers of Sindh other than Karachi have similar poor indicators as the rest of rural Sindh. Hence socio-economic indicators are much better in Karachi if compared with the rest of Sindh. This shows skewed

development in favor of urban base. In the long run this disparity will bring negative implications for Karachi itself since this development gape will invariably push people to migrate from rural areas to Karachi only to aggravate its nearly crippled infrastructure and services. Urban slums haphazard growth is already at its worst. Though all this should not lessen the concern for urban poverty yet it indicates towards the vivid rural urban gape in the economy. The World Bank report also recognizes the fact that both gender and geographical based disparities are a major area of concern. Considering the both dimensions, the following facts are quite reflective.

- For every 100 boys being immunized in urban Sindh, only 70 girls get immunized in rural Sindh
- 87% of babies are full immunized in urban Sindh as against only 62% in rural Sindh
- For every 100 boys enrolled in primary schools of urban Sindh, only 43 girls are enrolled in rural areas of Sindh.

In 2001-02 for the first time in history, the percentage of households below poverty line in Sindh surpassed the rest of country. This has a direct bearing on other social indicators. Taking literacy for example, during ten years from 1995-96 to 2004-5 literacy rate increased by 61% in NWFP and 35% in Punjab, whereas the increase in literacy rate of Sindh was only 24% i.e. 57% and 11% less than the two provinces. During the same period the net enrollment in primary level increased by 34% in NWFP and 29% in Punjab, whereas Sindh registered dismally low only 6% increase in the net primary enrollment.

This unfortunate situation is a result of bad policies and bad management of resources. Public fund utilization in Sindh remained very low. According to the data of the Finance department of Sindh, during last seven years nine out of 10 sectors underutilized their allocated funds. An overview of

utilization of Annual Development Plan of last seven years given in Table.3 depicts the overall inefficiency and lack of capacity of implementing agencies.

Table.3 ADP utilization trend of last seven years

Sector	Utilization (%)		Years	
	Utilized (%)	Unutilized (%)	No of years fully utilized	No of years not fully utilized
Industries and Minerals	54	46	2	5
Water and Power	64	36	1	6
Statistical Research	70	30	2	5
Physical Planning and Housing	73	27	1	6
Health	75	25	1	6
Rural Development	76	24	3	4
Education and Training	81	19	1	6
Agriculture	83	17	2	5
Transport and Communication	89	11	1	6
Forest and Wildlife	115	0	2	5

All this mess is indeed a result of the worst governance imposed on the province from time to time. The document while sidetracking from the harsh political realities in the background does somewhat reflect on the governance in vogue in the province. A careful in-depth study of political history of Sindh can easily conclude that the political exigencies and vested interests of hidden and visible hands & heads have been dictating the fate of socio-economic development of the province.

Oil & Gas Resources and Rights of Provinces: A Case Study of Sindh

History and Background

Sindh, the southern province of Pakistan has two major regions of Hydrocarbons (i) Sindh Monocline, commonly known as Badin Block Area. It is mainly oil and gas bearing region (ii) Outside Sindh Monocline. The region includes Sukkur Rift Zone, Mazarani Fold Zone, Khirthar Depression and Karachi Depression. This region is mainly gas bearing. 1

History of oil and gas exploration in Sindh is now almost a century old. The first well in Sindh was drilled in Khairpur by Burmah Oil Company in 1925. It did not yield any output. After the discovery of Sui (Balochistan) in 1952, northern Sindh became focused area for hydrocarbons exploration. Pakistan Petroleum Limited discovered gas in Khairpur (1957), Kandhkot (1959) and Mazarani (1959). In 1957 a huge gas reserve of 6.8 Trillion Cubic Feet was discovered in Mari by Pak-Stanvoc Petroleum Project. The same company also drilled wells in Talhar (1957), Mirpur Bathoro (1958), Nabisar (1958) and Badin. Only Nabisar showed some gas and Talhar showed some gas and oil. Burmah Oil Company drilled wells in Lakhra (1958), Badro (1958-59) and Phulji-Dadu (1958). These reserves only showed some gas. In 1961, Oil and Gas Development Corporation was established. The OGDC discovered gas at Sari (1966), Kothar (1973) and Hundi (1977).

[1] Dr. Allah Dino Memon and Imdadullah Siddiqui, Petroleum Geology and Hydrocarbon Prospects of Sindh and Pakistan: Aug 2005

In the same years coastal areas also witnessed drilling activity. Sun Oil Co. drilled wells at Korangi Creek (1965), Patiani Creeck (1964) and Dabbo Creek (1964). All these onshore wells went dry. Some off shore drilling was carried out by Wintershal. The company drilled Indus Marine A-1 (1972), Indus Marine B-1 (1972) and Indus Marine C-1 (1975). Husky drilled well Karachi South A-1 (1978) but no major discovery was registered. Khaskheli Oil field was a breakthrough discovery in coastal district of Badin. The discovery was made by Union Taxas in 1981. It was followed by major oil discoveries in the same area. Laghari and Mazari fields were even bigger.

The decade of 1990 witnessed major hydrocarbon discoveries in Sindh that jacked up the contribution of Sindh in oil and gas production of the country. Some major discoveries were as follows

- Qadirpur by OGDC-1990
- Kadnwari by LASMO (now Eni)-1990
- Miano by OMV-1993
- Sawan by OMV-1998
- Bhit by LASMO-1997
- Zamzama by BHP-1998
- Mari Deep by MGCL-1997-98

Before these discoveries, Balochistan had been the major contributor of gas in the national production.

Major Oil and Gas Field of Sindh

Table.1 and 2 below show a brief profile of major gas and oil fields of Sindh. Source: Pakistan Energy Yearbook 2009, Ministry of P&NR, GoP

Table.1 Major Gas Fields of Sindh

Units: *TCF (Trillion Cubic Feet)*

Name of the Field	Operator Company	Year	Location	Estimated Recoverable Reserves	Cumulative Production	Balance Recoverable Reserve	Heating Value (Btu/cu.ft)
Zamzama	BHP	1998	Johi-Dadu	2.324	0.765	1.55	837
Bhit	Eni Pak	1997	Sehwan	1.605	0.735	0.870	840
Mari	MGCL	1957	Ghotki	6.98	3.622	3.365	733
Mari Deep	MDCL	1997-98	Daharki-Ghotki	1.21	-	1.21	560
Kadanwari	Eni Pak	1989	Khairpur	0.490	0.366	0.124	912
Kunar Deep	ODGC	1991	Hyderabad	0.577		0.57	1029
Qadirpur	OGDC	1990	Ghotki	5.056	.974	3.082	890
Miano	OMV	1993	Sukkur	0.542	0.377	0.165	920
Sawan	OMV	1998	Khairpur	1.5	0.856	0.6444	913
Kandhkot	PPL	1959	Kashmore	1.68	0.773	0.907	835
Kandhra	PEPL		Rohri	1.72	-	1.72	150

Note: Original Recoverable Reserves of Miano and Swan gas field were mentioned as 0.9 and 2.3 TCF in the editions of 2006 and 2007 of Pakistan Energy Yearbook. Strangely in the edition of 2008 and 20099 these figures have been shown as 0.54 and 1.5 TCF respectively without providing any explanation.

Table.2 Major Oil Fields of Sindh

Units: Million US Barrels

Name of the Field	Operator Company	Estimated Recoverable Reserves	Cumulative Production	Balance Recoverable Reserve
Zamzama	BHP	11.68	5.02	6.66
Bobi	ODGC	11.564	5.174	6.390
Chack-66 NE	OGDC	2.86	-	2.86
Dars and Dars Deep	OGDC	10.227	-	10.227
Kunar	OGDC	25.13	16.703	8.427
Kunar Deep	OGDC	5.777	-	5.777
Lashari Centre	OGDC	11.024	10.335	0.689
Pasakhi. Pasakhi NE	OGDC	37.015	29.029	7.986
Qadirpur	OGDC	10.114	2.868	7.249
Sono	OGDC	19.244	15.865	3.388

Tando Alam	OGDC	22.56	16.226	6.334
Thora	OGDC	31.2	17.982	13.218
Akri North	BP	6.111	5.919	0.192
Dhabi and Dhabi S	BP	9.108	7.648	1.46
Dhabi North	BP	7.498	5.919	1.579
Ghungro	BP	10.467	7.041	3.462
Jagir	BP	7.349	4.736	2.613
Khaskheli	BP	13.654	12.194	1.46
Laghari	BP	21.413	21.452	0.155
Liari and Liari Deep	BP	8.113	7.897	0.3
Mazari	BP	22.455	22.099	0.356
Mazari South and Deep	BP	24.59	23.041	1.549
Sakhi, Sakhi Deep	BP	8.32	5.283	3.037
Tangri	BP	12.933	11.43	1.503
Zaur, Zaur Deep, South	BP	7.806	5.616	2.19

The above table also indicates that much of the oil reserve of Sindh has already been sucked out and the province would soon be without oil reserves unless some new major discoveries occur.

Contribution of Sindh in Oil and Gas Production of Pakistan:

According to Pakistan Energy Year Book 2008 (published by the Ministry of Petroleum and Natural Resources), Sindh produced 13.87 million barrels of oil (i.e. 38,000 barrels/day) that makes 56 percent of the total national oil production during 2006-07. For details, refer Table.3

Table.3 Province-wise Oil Production in Pakistan, 2007-08

Province	Oil Production (Million Barrels)	Percentage
Sindh	14.37	**56.13**
Punjab	6.51	25.46
NWFP	4.68	18.32

Balochistan	0.024	0.1
Pakistan	25.60	100%
Source: *Pakistan Energy Yearbook 2008, Ministry of Petroleum and Natural Resources, GOP*		

During the same year, Sindh produced 1,033,110 Million cubic feet of gas, which makes approx 71 percent of the total national gas production. For details, refer Table.4

Table. 4 Province-wise Annual Gas Production: 2008-09

Province	**Non-Associated Gas *(MMCF)***	**Associated Gas *(MMCF)***	**Total *(MMCF)***	**%**
Sindh	1,032,198	15,475	1,047,673	71.72
Punjab	66,728	9,560	76,287	5.22
NWFP	28,677	2,682	31,359	2.14
Balochistan	305,359	0	305,359	20.9
Pakistan	1,432,962	27,717	1,460,678	100%
Source: *Pakistan Energy Yearbook 2009, Ministry of Petroleum and Natural Resources, GOP*				

These tables highlight the following facts.

- Sindh is the largest oil producing province of Pakistan
- Sindh is the largest gas producing province of Pakistan
- Sindh and Balochistan together contribute more than 93 percent of the national gas production and therefore can be considered energy basket of Pakistan.

The same data source however reveals that Sindh and Balochistan consume only a small portion of their production. According to statistics, Sindh consumed only 4٤ percent of its production whereas Balochistan consumed just 29 percent of the gas it produced. Punjab utilized a staggering 852 percent against its production in the national output of gas. Higher

consumption of energy is considered as major indicator of higher development. One can safely conclude that much of the development is centered in one province that consumes natural resources produced by other provinces. Table.5 provides revealing details of the consumption pattern of gas.

Table.5 Province-wise Gas Production and Consumption Trend, 2008-09

Province	Total Gas Produced *(MMCF)*	Total Gas Consumed *(MMCF)*	Ratio (Consumption VS Production in %)
Sindh	1,047,673	485,271	46
Punjab	76,287	649,938	852
NWFP	31,359	44,706	142
Balochistan	305,359	89,519	29
***Source:** Pakistan Energy Yearbook 2008*			

The above table reveals interesting facts as under

- Sindh consumes less than the half of the gas against its production
- Balochistan consumes just around a quarter of the gas against its production
- Punjab consumes 8.5 times more gas than its production

These facts can also be gauged from the Table.6 showing sector-wise details of gas consumption in the provinces.

Table.6 Sector-wise Consumption Trend of Gas in Provinces, 2007-08

Type of Consumption	Province-wise Number of Consumers				
	Sindh	Punjab	Pakhtunkhwa	Balochistan	Total
Domestic	1,866,585	2,760,238	375,325	179,372	5,181,520
	36%	53%	7%	3%	100
Commercial	20,671	41,111	8,065	1,887	71,734
	29%	57%	11%	3%	100
Industrial	3,515	4,792	650	46	9,003
	39%	53%	7%	1%	100
Total	1,890,771	2,806,141	384,040	181,305	5,262,257
	36%	53%	7%	3%	100

Source: Pakistan Energy Yearbook 2008

There are also sharp disparities within the provinces where developed urban and peri urban centers are the major consumers of the gas and most of the gas producing areas do not have access to gas even for domestic use.

State of Human Development in the Oil and Gas Producing Areas

Estimated value of oil produced from Sindh at the rate of US$ 50/Barrel comes around 55.5 billion rupees per year. In spite of that, the larger part of rural Sindh which produces this wealth of resources is far behind in development indicators. Practically the federal government has all controls over the oil and gas fields located in provinces. The Federal Government doles out 12.5 percent royalty to provinces based on the well head price. The amount becomes part of provincial income in the annual

accounts. There is no policy which may ensure that the oil and gas producing talukas/districts should also get a certain part from that royalty. That's why oil and gas producing talukas/districts of Sindh and Balochistan are conspicuous by poor indicators of human development. Major oil and gas producing areas of Sindh such as Badin, Nara taluka in Khairpur, Saleh Pat in Sukkur, Sehwan and Thano Bola Khan tlaukas in Jamshoro and Johi taluka in Dadu are mostly under developed and communities surrounding the oil and gas field live in primitive ages. Data on state of human development shows that the major oil and gas producing districts of Sindh are suffering from worst state of human development.

- According to Human Development Report of UNDP (2003) Badin, the major oil producing district ranked at 60th out of 91 districts in the country. Under the same ranking only 3 districts of Sindh (including Karachi and Hyderabad) found place in top thirty districts of country on Human Development Index. The same report placed Rural Sindh lowest among all urban and rural areas of all provinces ranked on Human Development Index. The report also shows similar trend for Balochistan. According to the report Blochistan has 12 districts among the last 30 districts ranked in the country. Whereas the top 30 districts on HD Index included only 3 from Balochistan. Ironically Dera Bugti was the last on Human Development Index in the country. Dera Bugti is home to the largest natural gas field "Sui" of the country.
- Millennium Development Goals Report 2006 of the Government of Pakistan also indicates similar trend of human development in the hydro carbon producing districts of Sindh. Table.6 shows ranking of three major oil and gas producing districts of Sindh against key development indicators.

Table.6 MDG Ranking 2005 of oil and gas producing districts (out of 98 Districts)

District	Indicator-wise Ranking			
	Net Primary Enrollment	Literacy Rate	Immunization	Water Supply
Khairpur	57	37	78	26
Dadu	70	43	53	56
Badin	47	60	60	43

This data leads to an important conclusion that the areas contributing wealth of oil and gas resources in the nationally kitty, do not receive their due share in development. This is a major cause of resentment among the communities and civil society of Sindh and Balochistan. A responsible state has to make sure that all citizens should receive their justified share in development opportunities.

Employment

Local employment is another matter of serious concern. Oil and gas fields are mostly located in remote and underdeveloped areas. Oil and Gas companies have their head offices in big cities like Islamabad and Karachi where Sindhi local staff hardly makes a small fraction of their human resource. Former Minister for Petroleum, Mr. Amanullah Jadoon told National Assembly on 14th April 2007 that out of 11,613 employees in SSGC and SNGPL, Sindh's share was 3,613 whereas Punjab's share was 5,454. The oil and gas companies often extend an excuse that they do not find qualified and experienced people from rural Sindh and Balochistan. This argument has lost its validity as the provinces now have reputed universities and technical institutes producing sizeable number of professionals with required qualification. Unfortunately the graduates of these districts do not get even opportunities like management trainee or auxiliary

staff. Hence educated youth of oil and gas producing districts is deprived from learning and training opportunities in the companies. Table.7 shows two case studies on employment of a multi-national oil and gas company operating in Sindh.

Table.7-A Statistics of local employment in a company

Office	Total Employees	Local Staff
Islamabad	60	2 (3.3%)
Karachi	176	10 (5.6%)
Field	204	175 (85.7%)

Source: *Personal Contacts*

Table.7-B Statistics of local employment in a company

Office	Total Employees	Local Staff
Head Office	225	15
Field	300	20

Source: *Personal Contacts*

The situation is not much different in other companies and can easily be generalized. The Petroleum Exploration & Production Policy 2009 also makes it obligatory on companies to invest in the training of Pakistani employees. The amount obligatory in this regard is mentioned in Table.8.

Table.8 Amount to be spent on Training

Phase of Operation	Amount per year (US$)
Onshore Zones	
During Exploration	25,000
During Development and Production	50,000
Offshore Zones	
During Exploration	50,000
During Development and Production	250,000

Source: *Petroleum Exploration & Production Policy 2009*

This amount can be used to build capacity of unskilled or semi-skilled locally hired human resource. Hence the excuse of unavailability of trained local human resource would lose justification. Statistics on employment in the sub-contractor companies are equally pathetic.

Oil and gas companies outsource most of their work through output based sub contracts and their contractors often do not comply with the company policies. These sub contractors are mostly non locals and they hire most of their staff from other areas, thus depriving local youth from even low paid jobs. Catering companies are a good example to cite, where even waiters and cooks are brought from big cities. Other technical and semi-technical contracts such as communication systems, drilling, construction, security, transport etc are also outsourced. These sub contractors are almost all non-locals. They absorb a large number of employees which do not appear on the company's payroll and are often non locals. Field staff which is mostly low paid labor is somewhat considered as it is not feasible to bring them from other provinces or urban areas. A small number of such low paid employees are hired through local influential as a bribe to them. Companies making tall claims of investing in local human resource flagrantly violate their own policies.

Directorate General of Petroleum Concessions (DGPC) of the Federal Ministry of Petroleum and Natural Resources is responsible for overall employment regime of these companies. The Annexure.3 of the Petroleum Exploration & Production Policy 2009 reads "employment programs for Pakistani nationals shall be agreed upon with DGPC on an annual basis as per guidelines issued from time to time." Regrettably the Islamabad based DGPC has never taken up this issue with the companies. Such guidelines are never made public and local communities or civil society is never consulted on such policies.

No company has displayed any such policy on their websites neither any could be found on the DGPC's website. In brief, the overall share of local communities in jobs is dismally low. Interestingly Article XVII of the Petroleum Concession Agreement require companies to gradually replace expatriate staff with nationals but does not ask for replacing nationals with locals as they become available. The present share in employment from the oil and gas producing areas is hard to justify. It is in the business interest of the companies to address this issue which is otherwise bound to create problems for their operations. Apart from that, it is moral and professional obligation of the companies to invest in development of local human resources enabling them to compete for mid level and senior positions in the companies. Some of the companies have made some appreciable investments but on a negligibly small scale.

Community Development

Article XXIX of the Petroleum Concession Agreement (PCA) makes it obligatory for the oil and gas companies to undertake social welfare programs in the concession areas. These programs are designed in consultation with the local administration. Under the Petroleum Exploration & Production Policy 2009, the size of amount to be spent on social welfare has been linked with the volume of hydrocarbons produced from the area. An amount of US$ 30,000/lease year has also been made obligatory during exploration. The amount increases substantially on commercial production. The details applicable on Sindh province are provided in Table.9.

Table.9 Amount to be invested in Community Development Programs

Production Rate (Barrels of Oil Equivalent per day (BoE/day)	**Amount per year (US$) for Zone II and III**
Less than 2,000	37,500
2,000-5,000	75,000
5,000-10,000	150,000
10,000-50,000	300,000
More than 50,000	525,000

***Source**: Petroleum Exploration & Production Policy 2009*

Although the amount makes a small fraction of the hefty profits from the concession areas yet substantial for underdeveloped remote areas. However, only few companies manage this portfolio professionally. The persons hired to manage this fund are often urban based corporate bosses who have little understanding of local communities and their issues. As a result of that, the fund is often utilized under influence of local power lords or the local administration, to keep the books straight. Communities or local civil society is often kept at arms length or only superficially involved in decision making on community development fund. These powerful local lobbies often seek their own petty interests and do not allow poor communities to benefit from such fund. As a result of that, companies are also deprived from the benefit of developing friendly relationship with local communities through Corporate Social Responsibility (CSR) investments. Although some of the multinationals have developed proper systems for this portfolio but majority of companies still lack professional approach. National companies particularly have a poor track record on this account. Discretionary corporate funds are mostly spent on advertisements, gala dinners, sports events and other such entertainment oriented activities in urban centers. These funds can also be utilized for development of local communities thus

earning good will for business. Wise use of these funds can make difference in the lives of poor communities surrounding the wealth generating concessions and also make the communities friendly to companies.

Some of the industry wizards argue that they are there only for business and community development is government's responsibility. They totally forget that natural resources historically belong to people and not the governments or companies. Exploitation of their resources without their consent is violation of fundamental human rights of communities. On the other hand state also does not behave in a responsible manner to ensure judicious benefits to local communities in return of their wealth being extracted. When communities realize that their nature's endowment is being extracted and they continue to live in primitive ages, the reaction becomes violent. There are numerous examples e.g. Niger Delta in Nigeria and Sui in Pakistan from where industry has learnt a lot and practices are being changed now all over the world.

Production Bonus

According to Article XXIII of the PCA, the companies are required to deposit Production Bonus with the President at the commencement of commercial production. The article clearly mentions that the Production Bonus will be expended on infrastructural development in and around the Area (i.e. concession area). The amount of the Bonus is linked with size of production as mentioned in Table.9

Table.9 Production Bonus

Cumulative Production (MMBOE)	Amount (US$)
Within 90 days of start of commercial Production	600,000
Upon reaching 60 MMBOE (million barrels of oil equivalent	1,200,000
Upon reaching 120 MMBOE	2,000,000
Upon reaching 160 MMBOE	5,000,000
Upon reaching 200 MMBOE	7,000,000

Source: *Petroleum Exploration & Production Policy 2009*

The amount so far paid by the companies has never been returned to the oil producing areas. According to newspaper reports Government of Sindh has raised this issue with the Federal Government. According to GoS, various companies have deposited an amount of 2.39 billion rupees since 1996 on account of their production from the province[2]. It is strange that the amount is lying with the federal government without any justification. The amount must also have accrued substantial interest on deposits. According to another newspaper report[3] Ministry of Petroleum has agreed to transfer an amount of 2.39 billion to Sindh accrued against the Production Bonus. However Ministry of Finance has certain objections on transfer of Rs. 1.38 billion. According to the news report, the Ministry of Finance had no separate account to deposit Production Bonus received from various companies till 2007. This account was separated only in November 2007. Hence the Ministry has no separate record of the amount under question till 2007. This is mind boggling that the Finance Ministry had no separate account for this head. Even if there was no separate budget head, there must be some documentation against each transfer in the

[2] Daily Kawish-Hyderabad, 20th January 2009
[3] Daily Kawish-Hyderabad, 30th January 2009

account. Whereas the Ministry of Petroleum had the same record available that formed the basis of calculations for Government of Sindh. According to the same newspaper report, some 13 districts of Sindh would benefit from the Production Bonus. The district-wise projected amount is as follows. Khairpur Rs. 671 million, Dadu Rs. 514 million, Tando Mohammad Khan Rs. 43.9, Tando Allahyar Rs. 125.0 million, Badin 260 million, Thatta Rs. 120 million, Jamshoro Rs. 49.7 million, Ghotki Rs. 81.5 million, Matyari 25.2 million, Sanghar Rs. 31.2 million, Kashmore Rs. 31.1 million Jacobabad Rs. 10.7 million and Shikarpur Rs. 29.7 million.

Once the amount is transferred to these districts, the next question would be a policy to ensure that a part of this amount should also reach the talukas and union councils from where oil and gas is being produced. Judicious use of this money can bring substantial benefit to poor communities in the areas.

Environmental Obligations

Objective No. 7 of the Petroleum Exploration & Production Policy 2009 reads as "To undertake exploitation of oil and gas resources in a socially, economically and environmentally sustainable and responsible manner." However the policy document does not outline any guidelines on environmental aspects. Environmental Protection Act 1997 provides overall framework of environmental regulation in the country. Under the Act, oil and gas exploration projects are subject to either Initial Environmental Examination (IEE) or Environmental Impact Assessment (EIA). Few multinational companies set a healthy trend of conducting quality IEEs and EIAs but with the passage of time this activity has been reduced to a mere ritual. A handful of consulting firms have perfected the art of creating EIAs and IEEs as per the wishes of companies. The fundamental

problem with EIA is that, the study is financed and practically managed by the companies. EPAs are actually involved at the stage of public hearing and approval of the EIAs. Due to rampant corruption and lack of regulation capacity within the EPAs, the environmental regulation of oil and gas exploration projects is fast loosing its credibility and public hearings are no more considered as an effective accountability forum to critically screen EIAs. Most of the public hearings of EIAs are conducted in big cities far away from the communities subjected to the wrath of environmental violations. Sometimes companies transport a handful of local community representatives to attend EIAs who are often beneficiaries of the companies' operations. Thus stakeholder participation from local areas remains nil for all practical purposes. EIAs are normally approved with some minor amendments for the sake of record. The EPAs have very limited in-house capacity to effectively review the EIAs as these studies involve variety of disciplines. EPAs also lack capacity of proper monitoring of compliance to stipulations of the EIAs. Human, technical and financial constraints are the major limiting factors that have rendered EPAs ineffective to check environmental violations by the companies. This scenario has provided enough space to the E&P companies to evade environmental obligations. Although, some multinational companies out of their internal checks and commitments under Corporate Social Responsibility (CSR) claim to uphold environmental sanctity of their areas of operation but the local communities have sever complaints of environmental violations. Some consulting firms disclose in confidence that in certain cases diagnostic studies conducted by the companies confirmed environmental violations but the same were hushed up by the management. Poor regulatory mechanism and weak civil society are key responsible factors that provide safe passage to companies with environmental violations. As a result of that, local communities pay the price in the shape of

diseases, loss of productive land and pollution of their ground water.

Rights of the resource producing areas

Oil and gas resources are created through a natural process of millions of years and are therefore historical resources of communities living in the areas. However the state has taken over these resources in the name of national interest and the coin of natural rights has gone obsolete.

Various countries in the world have adopted different models of sharing benefits accruing from the oil and gas resources generated in their geographic boundaries. From Texas to Niger Delta, sharing of benefits and right over oil and gas resources has remained at the heart of conflict between federation and the federating units. The following examples would be helpful in understanding various models of sharing benefits.

Venezuela: According to the Constitution of 1999 (art.12), all oil and gas reservoirs are the property of the national government. States and municipalities do not have any property rights over the resources. It applies both on the on-shore and off-shore resources. According to the laws related to oil production, 25% royalty goes to states. 70% is transferred to those states where oil fields are located and the rest to the non-producing regions.

Brazil: In Brazil, the benefits are shared at the level of municipalities. Oil profits are shared with all states and municipalities through entitlement fund, according to quotas directly proportional to their populations (municipalities) and inversely proportional to their per capita income (states). In 1985, with the approval of law 7453, states and municipalities were entitled to royalties from offshore production at a rate of 80% split as follows; 20% for all states and municipalities, 30%

for the bordering states and 30% for the bordering municipalities. In 1989, Law 7990 required that 10% of royalties from on-shore or off-shore production be sent to municipalities featuring installations for the loading and unloading of oil and natural gas.

Argentina: According to the formula, 21 percent of the revenue goes to the National Health Service and remainder is split 60-40 between the federal and provincial government. Much of this income going into federal and provincial treasuries is allocated to National Housing Fund, the Federal Road Fund, the Water Infrastructure Fund and the Transport Fund etc.

Canada: Canada's constitution explicitly vests ownership rights to natural resources (including oil and gas) with the provinces in which these are located.

At the most general level, both federal and provincial governments levy a corporate income tax on all for-profit, privately held companies doing business within their jurisdictional areas. These taxes, of course, also apply to firms active in oil and gas development and production. As far as onshore areas are concerned, the approaches used by all of the relevant jurisdictions (including the federal government) to collect revenues specific to oil and gas activities have evolved over time. The fundamental features of these revenue-collection systems, however, have remained largely unchanged. Firms make payments to the relevant government (that of the jurisdiction holding ownership rights in the oil and gas resources) for the acquisition of exploration rights (these payments are often called bonuses or bonus bids). These are one-time payments designed to secure not only exploration rights, but also their subsequent conversion into production licenses or leases to any oil and gas reserves discovered.

Since 1957 the federal government has funded out of its general revenues a system of fiscal equalization that provides transfer payments to the governments of provinces with low fiscal capacities to bring them up to an after-transfer fiscal capacity that is close to the national average. Other major transfers, such as for health, post-secondary education, and welfare, are very large (though not directly related to provincial oil and gas revenues) and also have an equalizing impact. Over the years, the treatment of provincial revenues from natural resources (including oil and gas) within the equalization system has varied markedly: from the two extremes of complete exclusion, to that of 100% inclusion. At the time of writing, the pendulum was firmly in the middle of its arc: 50% of provincial oil and gas revenues are currently included in the calculations that underlie the determination of equalization payments.

India: Articles 294-297 of the Constitution provide that the ownership of land and natural resources located within the territory of a state, vest with that state. Thus, the states own all of the petroleum resources found under the land in their territory. Such ownership of on-shore petroleum resources has been further recognized by the Central legislation on oilfields development and regulation. However this ownership is not absolute and is significantly restricted by the Central government's powers over resource management.

The industry, both upstream and downstream, is under the control of the Central government because of Article 246, which asserts that only Parliament may make laws with respect to matters enumerated in List I of the Seventh Schedule, of which Entry 53 is —Regulation and development of oilfields and mineral oil resources; petroleum and petroleum products. Natural gas, when found along with oil is treated as a petroleum product and when found un-associated is a mineral resource.

Therefore, in either case natural gas is under the Central government's purview (and —gas and gas works, which is a state subject, does not include natural gas).

The Central Government has taken under its control all matters relating to the development of mineral oil and gas through the Oilfields Regulation and Development Act (ORDA). With this Act, the Central Government reserves to itself the right to make rules for regulating the grant of oil and gas development leases in respect of any mineral oil or any area as well as conservation and development of mineral oils even though it may be an onshore resource and owned by the states. In particular, these rules may provide for, inter-alia, the collection of royalties, and the levy and collection of fees or taxes, in respect of mineral oils mined, quarried, excavated or collected.

The Petroleum and Natural Gas Rules, promulgated under the ORDA, lay down the terms and conditions for granting exploration licenses and development leases in respect of petroleum and natural gas. States may grant a license or lease for onshore oil and gas exploration and production but strictly in adherence to these rules. These rules recognize the states' ownership of petroleum extracted from within their boundaries, which entitles them to collect royalties, and to grant leases and licenses for exploration and extraction of petroleum. However, their powers are controlled by the Centre because the royalty is fixed by the Centre and any license or lease is granted only after the Centre's approval.

Pakistan: In Pakistan, oil and gas resources are effectively controlled by the Federal Government. The recently enacted 18th amendment in the constitution however promises larger share for the oil and gas producing provinces. The amended Clause 172 (3) says "Subject to the existing commitments and

obligations, mineral oil and natural gas within the province or the territorial waters adjacent thereto shall vest jointly and equally in the Province and the Federal Government". The coming years would determine how this clause is effectively executed.

So far the provinces received 12.5% royalties and certain other proceeds. Article 161 of the constitution of 1973 reads "Natural Gas and Hydro Electric Power: Notwithstanding the provision of article 78, the net proceeds of the federal duty of excise on natural gas levied at well head and collected by the federal government and the royalty collected in the federal government, shall not form part of federal consolidated fund and shall be paid to the provinces in which the well head of natural gas is situated." Also the constitution puts the Liquid Petroleum Gas under the Part II of Legislative Lists. Council of Common Interest (CCI) is the constitutional body responsible to "formulate, and regulate policies" on the subject. However in violation of the constitutional provisions, Federal Government's Ministry of Petroleum and Natural Resources have been "formulating and regulating" policies on oil and gas. Directorate General of Petroleum Concessions (DGPC) has been authorized to invite bids and issue licenses to the oil and gas companies. The whole country has been divided in zones and blocks for the purpose and DGPC is the sole authority of this business. Provinces are no where consulted at any stage. The DGPC receives application fees and rentals as per the following rates.[4]

Application Fees

- Reconnaissance Permit Rs 50,000
- Exploration License Rs 100,000
- Development and Production Lease Rs 200,000

[4] Petroleum Exploration & Production Policy 2009

Rentals

All holders of exploration licence are required to pay an advance rental charge at the following rates:

- In respect of the five years of the initial term of the licence; Rs.3500 per square kilometre or part thereof; or in respect of each year of the initial term of the licence; Rs.800 per square kilometre or part thereof;
- In respect of each renewal of the licence; Rs.5000 per square kilometre or part thereof; or in respect of each year of the renewal of licence; Rs.2750 per square kilometre or part thereof.

During the lease period, the following annual advance rental charges will apply:

- Rs.7,500 per square kilometre or part thereof covering the lease area during the initial lease period.
- Rs.10,000 per square kilometre or part thereof covering the lease area during the renewal period of a lease and further lease term extension.

Considering the number of active leases, this must be a substantial amount that also goes to the federal government.

According to the Petroleum Exploration & Production Policy 2009, companies required to pay Royalty at the rate of 12.5% of the value of petroleum at the field gate. This amount is transferred to the concerned province by the Federal Government.

Gas Development Surcharge is another source of income for provinces. Gas Development Surcharge is the difference between the prescribed price and the consumer's price. Price is determined by OGRA. The Gas Development Surcharge is levied under the Natural Gas (Dev: Surcharge) Ordinance, 1967. In accordance with the said Ordinance the Federal Government

has to fix the sale price for consumers and prescribed price for Gas Companies on the basis of their fixed return. The difference between consumer gas price and the Companies prescribed prices as defined in the Natural Gas (Development Surcharge) Ordinance, 1967 is the margin available to the Government as Development Surcharge. The prescribed price of Sui Northern Gas Pipeline Ltd (SNGPL) and Sui Southern Gas Company Limited (SSGCL) is based on the following:

- Wellhead price of gas.
- Excise Duty at Well-head.
- Operation and Maintenance Cost.
- Depreciation.
- Return of Gas Company, 7.5% (SNGPL)/ 17% (SSGCL), on Assets.

During recent months government has been increasing the companies' price on the demand of gas companies but did not proportionally increase the consumer price to avoid public outcry. This has narrowed the difference between Prescribed and Consumer prices thus lowering GDS transfers to provinces. The Federal Government could also have absorbed this margin by lowering its taxes (excise duty) but the same was not done and small provinces' GDS income was eroded each time. According to a news report, Government of Sindh has recently taken up this issue with the Federal Government. According to Government of Sindh, the GDS received against the gas production of 1,000,415 MMCF was Rs. 24.01 billion in 2006-07. In the following year, the amount was reduced to Rs 14.86 billion in spite of the same level of gas production. Whereas in the following year, the projected receipts have been further lowered to Rs. 11.32 billion[5].

[5] Khokhar Akhtyar, Daily Kawsih-Hyderabad, 23rd January 2009

In the budget of 2008-09, Government of Sindh estimated the receipts of Rs 40.79 billion through oil and gas royalties and GDS. This makes hardly a fraction of what the province is contributing to the national exchequer through its oil and gas resources. Nevertheless the amount is substantial and should have made some visible impact in the oil and gas producing areas. Due to poor management of resources and absence of appropriate policies, oil and gas producing areas do not receive an assured part of this income.

These facts lead to a well placed demand of the people of Sindh that the provinces should get right over natural resources and not just royalties and surcharges.

Conclusion

Oil and gas resources are central to conflicts in the world. Local communities are at odds with E&P companies and governments on judicious sharing of benefits. Federations specially are under pressure from the federating units on sharing of revenues and natural resources. Pakistan has witnessed turmoil in Balochistan and a conflict is brewing in Sindh. Local communities are genuinely frustrated because not only they do not receive benefit from oil and gas revenues but are also deprived from employment opportunities in the industry. Pakistan may encounter serious political confrontation if the question of the ownership of natural resources is not prudently addressed on priority basis.

Recommendations

Oil and gas resources should be recognized as provincial resources and provinces should be given right over these resources.

All concession areas should be leased by provincial governments on their own terms and conditions. Provinces may pay royalty to the federal government.

Pending Production Bonus should be issued to concerned areas and spent through a transparent mechanism which ensures at least 50% of the amount to be spent in the concession areas and remaining preferably in the adjoining areas. In future, Production Bonus should be released to the concerned district.

The concerned authority should develop employment policy for oil and companies in consultation with local communities and civil society. This policy should be made public through mass media and be posted on websites of the concerned authorities and companies.

People of the concession area villages or from the nearest district should be given first preference in all types of jobs (skilled, non-skilled and managerial) in oil and gas companies both in field and head offices. This will develop stakes of local communities in companies' business and they would facilitate companies operations.

At least 50 percent jobs in all categories specially in management cadre should be given to local people available in the concession areas or in the nearest district if not locally available. Hiring from outside areas should only be considered when required human resource is not locally available. Details of all employees in companies should be made public on companies' websites.

Hiring process in oil and gas companies should be made transparent and sensitive to local communities. All vacancies in oil and ga companies should be advertised in local newspapers of the concerned province and graduates from local educational

institutes should be given preference. Their capacities can be built through training programs.

Oil and gas companies should be made responsible to invest in employable human resource development in the area. After commercial production, the companies should initiate a local human resource development program in consultation with local stakeholders. The program should provide a time-bound comprehensive plan for developing local human resource through various initiatives e.g. establishing training centres, scholarships for technical education and internships.

To make CSR fund more transparent, it should be made compulsory for each company to formulate a stakeholder committee from the concerned district to decide spending of CSR funds. The committee should have representation from communities in the concession areas, civil society of the concerned district, elected representatives, local administration and the company. Guidelines should be developed to ensure transparent process of identification, approval, execution and monitoring process of CSR projects. Details of CSR projects should be available on the companies' websites.

An independent authority should be established at provincial level to oversee community related affairs in concession areas, receive complaints and redress them. This will also help companies to sort out local issues through a competent forum and would save them from bribing local influential. A district level sub-committee can also be established under such authority to handle local problems at local level. Both, the communities and the companies would benefit from this arrangement.

Environmental Protection Agency (EIA) should commission an independent committee of experts for making the IEE/EIA

process effective. This committee should approve ToRs, monitor process, review documents and monitor compliance of the stipulations of IEEs/EIAs. Local representation from the concerned district should also be ensured during the whole process of any IEE/EIA/SIA. The expert committee should assist EPA in making the IEE/EIA process effective at all stages.

All IEE/SEIA documents should also be available in local languages of the concerned area so that local stakeholders can effectively participate in the process.

Public hearings of EIA/SIAs should also be held in the concerned district where local stakeholders can raise their concerns and suggestions before the body of independent experts.

Environmental Audits should also be made legal requirement to ensure effective compliance of the social and environmental commitments.

Tackling Unemployment in Rural Sindh

Unemployment in rural areas is among the most daunting challenge faced by the new Sindh government. This has been a chronic issue in country and specially in Sindh, where rural areas are fast loosing their agriculture based employment potential due to persistent shortage of water and land degradation. Almost 14 million people in rural Sindh directly depend on agriculture as their major source of livelihood. Agriculture acts as lifeline for national economy in terms of food security, revenue generation and employment. However this source of livelihood and employment is under severe pressure due to

variety of reasons. Drought, faulty water distribution mechanism, poor management of water resources, land degradation, lack of research and inept market policies are the few among the long list of reasons taking toll of agriculture economy.

The situation can be gauged from the following facts

- Major crops in Sindh including Wheat, Rice, Cotton and Sugarcane registered severe decline in out put during 1999/00-2003/04. The growth recorded in these crops during 1980/81-1999/00 was 1.7, 1.8, 3.9 and 5.5 percent respectively. Whereas these crops registered negative growth of -6.7, -10, 0.6 and 2.6 percent respectively during 1999/00-2003/04. (World Bank Report, 35001-PK)
- Irrigated area under Sukkur barrage was 50.25 lac hectares in 1999-00, which declined to only 5.3 lac hectares in 2003-04.
- Irrigated area under Guddu barrage was 17.32 lac hectares in 1999-00, which declined to only 20 lac hectares in 2003-04.
- Irrigated area under Kotri barrage was 24.95 lac hectares in 1999-00, which declined to only 6.3 lac hectares in 2003-04.

As a sequence major crops registered a decline in area under cultivation. The following table shows the decline in area sown under important crops from 1995-96 to 2004-05

Crop	Area (000 hectares)	
	1999-00	2004-05
Rice	642.3	543.1
Sugarcane	254.4	214.9
Wheat	1,106.4	887.4

Jowar	96.4	61.4
Bajra	111.5	5.7
Maize	11.6	3.0
Barley	23.7	7.7
Gram	87.0	50.9

(*Development Statistics of Sindh-2006, Sindh Bureau of Statistics)*

Declining produce has a direct bearing on rural poverty and employment. This clearly indicates that unemployment resulting from fast declining agriculture produce must be massive. A World Bank Report "Securing Sindh's Future-The Prospects and Challenges Ahead" paints a very grim picture of unemployment in Sindh. The report reveals that due to growing population, rise in literacy and migration, nearly 600,000 additional people would be entering in job market each year in Sindh. This is in contrast with the long-term annual job creation rate of 350,000 in the province. Obviously the resource strained public sector can not bridge this widening gape of employment demand.

Over recent decade Sindh has been frequently denied of its due share in water distribution. Growers of Sindh have been complaining that water shortage in canals and distributaries of Sindh has become a perennial problem. The new government would have to tackle this issue through effective representation in IRSA and WAPDA. Only judicious share and efficient use of water can improve agriculture related employment in rural Sindh. However climate change effect is likely to increase in the coming years and availability of water in river system would continue to be a question mark. To manage this risk, there is a need to diversify employment opportunities in rural areas of the province. Sindh Government needs to explore non-conventional avenues to create employment opportunities for rural communities both in rural and urban areas. However this would

be in addition to revitalizing agriculture sector as there is no substitute of this sector, not only in employment but overall dependence of economy as well.

Agro based industry could provide some relief in the short term. This may include processing units, packaging facilities and other small scale investments. However this requires state patronization through incentive package to mobilize investments in rural areas. Poor law and order conditions, bad shaped infrastructure and lack of incentives have been a barrier in growth of agro based industry in rural areas. As against Punjab where industrial areas have been established in several cities like Lahore, Faisalabad, Gujrat and Sialkot; industry in Sindh is mainly centered in Karachi except handful of units in Hyderabad, Kotri and Sukkur. Presently about 11,500 small and large industrial units are located in four major industrial areas of Karachi, providing employment to over 2.5 million people. Since rural Sindh has been predominantly agriculture based economy therefore human resource required for industrial sector has not been developed in rural areas. No government made any significant investment into infrastructure required for promoting rural industry. Due to lack of demand and poor administration, institutes of vocational training and job skills are also in bad shape in rural areas. Presently 45 Polytechnic and Mono-technic institutes are operating in Sindh having about 18,000 registered students. However only 8,000 of them studied in institutions located out of Karachi. Likewise Directorate of Manpower and Training is operating about 33 training centers including Technical Training Centers, Apprenticeship Training Centers and Youth Vocational Training Centers. However most of such centers in rural areas are rusting due to various reasons. Lack of faculty, infrastructure, financial resources and poor administration has been major causes of low performance of these institutes. The new government

needs to pay serious attention to these training centers. Human resource trained through these institutions can ease off the government from employment seekers' pressure. Rural youth is hard working and committed with honest earning, all they need is proper guidance and opportunities. Proper training through these institutions would not only open doors of urban based employment for rural youth but they will also explore opportunities outside the country, where almost 4 million Pakistanis are not only making decent earnings but also making significant contributions to national economy through remittances.

Quality education institutes are another area deserving attention in rural areas to create competitive human resource with advanced degrees. Public sector universities in rural Sindh are victim of lack of resources, quality faculty and infrastructure. Graduates from these universities can not compete with graduates from urban based private sector institutions. This is resulting in frustration among qualified rural youth. Quality education imparting institutions are mostly centered in Karachi, which are too expensive to afford for lower and middle class families of rural areas. Presently there are 25 HEC recognized degree awarding private sector institutes in Sindh; 23 of them are located in Karachi and remaining 2 in Hyderabad. From 2001/02 to 2005/06 these institutions produced over 36,000 graduates, all from Karachi except 900 from Hyderabad. This clearly indicates sheer imbalance in opportunities of quality education for rural youth. There is a dire need of establishing quality education degree awarding institutes in interior of Sindh so that rural talent also gets equal opportunities to compete in national and international job market.

Information Technology is a promising sector offering wide spectrum of jobs nationally and internationally. However rural areas are deprived from gaining any significant benefit from this sector. According to a research of Pakistan Software Export Board (PSEB), this sector is providing jobs to about 138,000 employees and the number of job opportunities is expected to be around 235,000 in 2009-10. Rural areas of Pakistan are far from the scene, let alone rural Sindh. PESB website shows 1,161 registered IT companies in the country. This includes 412 in Karachi, 331 in Islamabad, 418 in Lahore and remaining in other cities/towns. In Sindh some 25 institutions are offering degree courses in IT sector; 23 of which are in Karachi alone and one each in Hyderabad and Tando Allahyar. Due to such gape of access to IT education, rural youth have very limited opportunities to benefit from this fast growing job market. It is need of the time that quality education centers in IT should be established in all district headquarters to create more job opportunities for educated youth from rural areas.

Sindh Government should device a comprehensive strategy to tackle the challenge of unemployment specially in rural areas. It would be pertinent to recommend that a "Human Resource Development and Employment Authority" should be established to develop and execute long term strategies for creating employment opportunities for rural and urban youth to reach out to national and international job markets. The recent recession in national economy, cut in public sector development program and rapidly increasing inflation are adversely affecting livelihood of rural and urban poor. This recession would adversely affect existing employment opportunities, which can breed other social complexities. Unemployment in rural areas results in migration to urban areas thus over burdening the already crippled civic structure of urban areas. Breakdown of civic structure breeds multifarious problems in urban areas. To

create a socio-economic balance in urban and urban areas, there is a dire need to provide basic facilities and employment opportunities across the province.

Development Disparities and the MDG Targets

Second millennium ended with leaving several questions unanswered regarding human development needs. Wars, poverty, diseases, deaths, environmental disasters are only few among the long list f challenges bequeathed by the outgoing millennium. With unprecedented developments in the field of science and technology hundreds of problems were addressed but many more hundreds were created. Gape between and among the privileged and non-privileged nations raised more serious questions about the fundamental concepts of development. The situation called for more strategic commitments to reduce this gape through well defined and measurable targets in the key areas of human development. This need prompted an important initiative when United Nations' session held from 6 to 8th Sept 2000 in its New York headquarters, adopted a declaration on human development. Heads of states and governments adopted the same with a promise to address development needs in their respective areas. The Declaration is now known as Millennium Development Goals and has become an important yardstick of sustainable development. These goals focused on the areas of poverty reduction, universal primary education, gender equality, reducing infant and mother mortalities, environmental sustainability and partnership building for human development.

Pakistan also committed to take efforts for achieving development goals in the country. Since last three years, government of Pakistan also issues an annual update on the progress made on the promised development indicators. The recent report of 2006 has been produced in the current year. The report provides information on the state of human development indicators up to year 2005. The elaborate document also provides revealing information on development gapes within different parts of the country. Total 98 districts have been ranked on various development indicators. The report confirms the fact that politically skewed development paradigm has left underprivileged areas less developed as compared to the privileged areas. Development disparities among the provinces can easily be judged from the district-wise ranking given in the document. Sindh and Balochistan provinces indicate relatively poor state of human development whereas Punjab has emerged as leading province in almost all areas of human development. An analysis of district-wise ranking of various MDG indicators would be helpful in understanding this complex challenge.

Net Primary Enrolment Ration

According to the report, Net Primary Enrolment Ratio has increased from 33 percent in 1998 to 48 percent in 2005. Likewise Literacy Rate has increased from 45 percent in 2001 to 53 percent in 2005. This shows significant improvement on this important front. However provincial distribution narrates grim disparities. Top ten districts include Nine from Punjab and the remainig one from NWFP. These districts are Sialkot, Narowal, Jehlum, Chakwal, Gujrat, Rawalpindi, Abbotabad, Attock, Lahore and Gujranwala. The first district from Sindh is Karachi which stands at number eleven. The first district from rural Sindh is Sukkur which stood at 30th number. The first district from Balochistan is Kech which

stood at 18th position. Among the Bottom ten districts, seven belong to Balochistan and three from NWFP.

Literacy Rate

Top ten districts under this indicator also show similar trend. Seven districts belong to Punjab and the remaining provinces share one district each. These districts include Karachi, Rawalpindi, Lahore, Chakwal, Gujranwala, Jehlum, Gujrat, Quetta, Abbotabad and Sialkot. The first district from Rural Sindh is Sukkur which stands at 11th number and the first district from Balochistan is Pishin at 16th number. The Bottom ten districts include eight from Balochistan and two from NWFP.

Gender Equality

Gender disparities are visibly prevalent in the country. This can be measured through several indicators however this report has focused on Net Primary Enrolment. In terms of better gender equality top ten districts include eight from Punjab and 2 from NWFP. The districts are: Toba Tek Singh, Narowal, Lahore, Gujranwala, Jehlum, Sialkot, Abbotabad, Mansehra, Sarodha and Mandi Bahaudin. The first district from Sindh is Karachi which stood at 13th number and the first district from Rural Sindh is Sukkur which stood at 31st number. The first district from Balochistan is Sibi which stood at 27th number. The Bottom ten districts include six from Balochistan, three from NWFP and one from Sindh.

Youth Literacy

Ranking of 98 districts show nine districts from Punjab among the Top ten districts and the remaining one is from Sindh. Sialkot, Lahore, Gujranwala, Gujrat, Karachi, Jehlum, Rawalpindi, Faisalabad, Toba Tek Singh and Chakwal are among the top ranks. The first district from rural Sindh is Sukkur which is ranked at 18th number and that from Balochistan is Quetta

ranked at 29th number. Balochistan and NWFP share seven and three districts respectively among the Bottom ten districts.

Immunization to Reduce Child Mortality

Pakistan is among the poorest performers on this important indicator. The trend of disparities is not too different in this regard. Punjab shares eight out of ten Top districts of the country, whereas Balochistan and NWFP share one each. The Top ten districts include Chitral, Jehlum, Sialkot, Gwadar, Khushab, Attock, Chakwal, Gujrat, Minawali and Bahawalnagar. The first district from Sindh, Hyderabad is ranked at 23. Zhob is the first district from Balochistan ranked at 21st number. The Bottom ten districts include seven from Balochistan, two from Sindh and one from NWFP.

Access to Clean Drinking Water

This is believed as a fundamental human and citizen right, which is unfortunately a rare commodity in the remote rural areas as well as in some mainstream urban areas. According to the ranking of 98 districts, Punjab and Sindh share eight and two districts respectively among the Top ten districts. These districts are; Shaikhupura, Narowal, Layah, Gujranwala, Bakhar, Lahore, Kasur, Shikarpur, Ghotki and Sialkot. The first district from Balochistan is Quetta which is ranked poorly at 47th number. Among the Bottom ten districts Balochistan has 6 districts, one from Sindh and three from NWPF.

Sanitation: The trend is some what different in this indicator. Sindh, NWFP and Balochistan share three districts each among the top ten districts and Punjab shares only one district. The top ten districts are placed in sequence of Quetta, Charsada, Kohat, Noshehro Feroz, Mardan, Pishin, Larkano, Nawabshah, Chaghi and Lahore. Balochistan has six districts among the bottom ten

districts. Sindh and Punjab has one each and NWFP has two districts among the bottom ten districts.

Conclusion: A closure scrutiny of the aforementioned data indicates that Balochistan and Sindh receive lesser attention in the key areas of human development. Even within Punjab, which ranks highest among all the indicators except Sanitation, almost all the districts belong to Central Punjab indicating poor state of human development in south Punjab. The following table of ten top districts clearly shows the disproportional trend of human development among the provinces.

Development Indicator	**Share among the Top Ten Districts**			
	Punjab	**NWFP**	**Sindh**	**Balochistan**
Net Primary Enrolment	9	1	0	0
Literacy Rate	7	1	1	1
Gender Equality	8	2	0	0
Youth Literacy	9	0	1	0
Reducing Child Mortality Rate	8	1	0	1
Access to clean drinking water	8	0	2	0
Sanitation	1	3	3	3
Total	**50**	**8**	**7**	**5**
Percent share	71%	11%	10%	7%

Likewise if bottom 10 districts are analyzed the trend gets reversed. Balochistan shares the highest number i.e. 47 out of 70 Bottom districts whereas Punjab has only one district among the bottom 70, which is negligible.

This trend shows that equal opportunities of development are not being provided to all citizens and the politically marginalized provinces of Sindh and Balochistan (specially their rural areas)

are receiving less than the desirable share in development. Ironically these are the richest districts in terms of natural resources feeding the economic engine of the country.

It would be pertinent to highlight here that the Declaration of the United Nations on the Millennium Development Goals reflects on equal development opportunities in clause six as part of fundamental values. It says "No individual and no nation must be denied the opportunity to benefit from development".

Interestingly the preface of the Pakistan MDG Report 2006 claims that "Pakistan is well set on the track to achieve MDGs by 2015". However the analysis of the achievements shows that the development trend is politically skewed. In presence of such wide gap of development among the provinces and rural and urban areas, the dream of achieving MDG targets would remain unfulfilled unless equal development opportunities are provided to all citizens of the country.

These facts however do not neglect the efforts being taken for human development in the country it however requires more pro-neglected approach which can create development-balance among all parts of the country.

It would be pertinent to recommend that the government should also set province-wise and if possible district-wise MDG targets and MDG indicators should farm one of the basis of resource allocation to provinces, which is currently shared unfairly on the basis of population only. If government is serious in providing equal development opportunities to all citizens, it should create special MDG fund for the provinces/districts to improve their human development indicators. If a balanced approach towards development opportunities is not adopted, this will worsen the prevailing social strain in the under

developed areas. In such a situation even if the country achieves overall goals of MDGs, the internal disparities would always negate the pride of this achievement.

Human Development: A Forsaken Priority

Human Development Report-2010 of UNDP indicates an encouraging improvement in ranking of Pakistan from 141 in 2009 to 125 in 2010. Hence the country has moved from the club of "Low Human Development" to "Medium Human Development" countries. However there is little to cherish mainly for two reasons. In the list of 169 countries ranked on Human Development Index (HDI), 125th position is still closer to the bottom of pyramid and our neighboring SAARC countries Sri Lanka (91st), India (119th), and Maldives (107th) still managed to perform better than Pakistan. The country is marked poor on other important human development indices too. For example American CIA's World Fact Book places Pakistan on 46th number among 174 countries ranked on military expenditure but it ranks Pakistan 153rd among 186 countries measured against expenditure on education. Similarly Pakistan is ranked at 166 among 224 locations when the Fact Book measures life expectancy. World Health Organization marked Pakistan at 171 among 185 countries ranked on health expenditure and placed the country at 122 while measuring health system efficiency of 191 countries.

HDI is not just a measure of vital development signs but it also fathoms political will for human development on the part of fate-managers of any country. With the end of the lunacy of cold war that eclipsed human development for several decades,

world community revisited the paradigm of human security. The sanity suggested that the world can only be made a secure place to live by veering resources and focus on human development. Millennium Declaration of United Nations became a watershed event in our history that first time brought human development on top of the agenda of global politics and markets. During past two decades several indices of human development were introduced to fathom political commitment of states towards real development of their citizens. A vibrant civil society both in developed and developing countries is now equipped with this popular agenda and the governments are subjected to this new atmospheric pressure.

Pakistan has a checkered history of moving from a development state in its formative years to a security state in latter half of its current age. Unfortunately it failed to maintain its development gains of earlier years-mired with yawning social inequities though-after the Zia regime that skirted human development goals with callous perfection. Although security needs always outshined the development allocations in our history, yet there were brief intervals of investment in human development particularly in 70s. Pakistan's annual budget ritual is marked by three Ds i.e. Defence, Debt Servicing and Development (PSDP). The former two are considered sacrosanct and the latter one is frequently scuttled to feed the other two.

'Truncated or mutilated and moth-eaten' as Jinnah-apprehensive of partition of Bengal and Punjab- termed Pakistan on 13th April 1947, inherited baggage of conflicts and security appetite. The ruling military and civil oligarchy fully exploited this heaven-sent opportunity and the spook of the border enemy justified everything in the garb of securing illusive ideological and porous physical borders of the country. The sacred journey started with the very first national budget

presented on 28th February 1948 that allocated more than 70% of total revenues of central government for defence. The trend dominated the subsequent years and the country spent 71 and 73 percent of the total government expenditure in 1948-49 and 1949-50 respectively. The paradox of human development and security needs can be judged from a telegram of British Embassy in Washington addressed to the Foreign Office on 28th July 1952. In an astounding disclosure it revealed that while the country was reeling under grain scarcity, our representatives were purchasing arms in USA. In one hand Pakistani representative had an appeal for a grant of one million ton wheat and in the other hand they carried a shopping list of military equipment of worth 45 million dollars. This trend prevailed and was interrupted by ZA Bhutto when development allocation took strides from 1973-74 till early years of Zia regime. In his last year 1977-78, Bhutto allocated 43.5% of the budget to development comparing with 22% to defence. Zia gradually reversed the allocations and after 1982 the snowballing defence allocation closely chased the development allocation. In the fag-end of his rule, defence dwarfed the development allocation in 1986-87 and 1987-88, first time after 1958-59. In spite of bruised economy due to 1971 war and oil shocks, Bhutto diverted significant resources towards development. However all these short-living gains were tormented by despotic Zia martial law and the country was degenerated from a potentially progressive development state to a retrogressive security state.

Foreign and Domestic debt had been another resource guzzler. By June 2010 the country was compressed by a huge foreign debt of 55.6 billion US$ and a domestic debt of almost equivalent size of Rs. 4.3 trillion. Public debt repayment had been second largest resource drain after defence since very first year of the country. Debt repayment kept rivaling defence budget since then but with

the culmination of Afghan war and demise of bi-polar world in early 90s when Pakistan lost its strategic enticement and became a redundant entity for internal powers, the debt repayment obscured the defence budget.

How much priority is assigned to defence and debt servicing compared to development could be judged from some recent developments. The Federal Minister for Finance informed the National Assembly on 1st October 2010 that in the current financial year Pakistan will pay a whooping sum of Rs 902.8 billion to service both domestic and external loans. The amount makes staggering 50% of the targeted revenue collection and 32.6% of the total outlay of the year. This can be compared with the size of annual public sector development allocation of Rs. 663 billion, later curtailed by 73 billion to 590 billion as reported by Dawn on 23rd September 2010. According to the same news report the initial allocation for Defence budget Rs. 442.2 has inflated by Rs. 110 billion to Rs. 552 billion. This does not include Rs. 72 billion for paying pension to former personnel of the armed forces as stated by the Federal Finance Secretary Salman Siddique before Public Accounts Committee (Dawn-22nd September 2010). The climax of the episode is that in the very same days teachers of universities closed all varsities across country because government expressed its inability to provide only Rs. 10 billion to meet expenses on 50% salary increase by the government itself and development needs including scholarships for those who are already studying abroad on scholarships (Dawn-23rd September 2010). These news reports adequately reflect on our misplaced priorities and labyrinth of political decision making.

Pakistan at this critical juncture needs to redefine its priorities and embrace the emerging paradigm of security where citizens are placed at the centre and not at periphery while taking decisions and making policies.

Provincial Autonomy and Right over Resources

Not too distant past, demanding provincial autonomy was not less than a sin and today with the change of winds government is itself championing the consultations on provincial autonomy. Government of Sindh recently organized a conference on Provincial Autonomy. Absence of leading nationalist parties of Sindh was conspicuous, which indicates that people are not willing to trust words coming from government corridors. This lack of trust has now become centre to all controversies in the country. The volume of trust deficit has surpassed all limits and inter provincial harmony now merits much more than a cosmetic ministry and seminars. The centre has to demonstrate its commitment to provincial autonomy through concrete actions. Ironically seminars and consultations on provincial autonomy are being carried out at a time when centre is selling islands of a province without talking to people or even the provincial government and a port of another province is being virtually managed by Islamabad. It is very unfortunate that six decades down the road, the country could not become a federation in true spirit, if it ever been, must be a distorted version of federation. Time and again this has been proved that the complex linguistic, cultural and socio-economic composition of Pakistan can not survive without true democracy and provincial autonomy.

In fact historical rights over resources and recognition of historical identities have remained at the centre of demand for provincial autonomy. A quick recap of nationalist movements of Bangladesh, Sindh, Balochistan, Frontier and Southern Punjab would reveal that all of them have been demanding provincial autonomy mainly in the context of rights over their resources and respect for their cultural identity.

A peep into the nationalist movements in Pakistan would reveal that the question of provincial autonomy and democracy has been strongly linked with right over resources.

Debacle of East Pakistan is a pertinent example to quote. The rights movement which started with demand for recognition of Bengali language soon converted into a movement of political and economic rights. Three of the six points of Sheikh Mujib were linked with the right over provincial resources. He demanded separate currencies or complete stoppage of capital flight from East to West Pakistan, right over taxes collected from East Pakistan and right over foreign exchange earned through East Pakistan products. When Pakistan came into being much of the export base relied on Jute produced from Bangladesh. When Bengalis demanded that the Jute Board should be under the provincial government and the income from Jute should be spent on development of Bangladesh, they were blamed for provincialism. In 1949 Pakistan exported goods of worth over one billion rupees to India which constituted 72 percent products from Bangladesh. Whereas Pakistan imported goods of worth over 730 million rupees, which constituted only 35 percent share for Bangladesh. In 1948-49 Pakistan earned 120 million rupees through the export duty on Jute but Bangladesh got only 35 million in share.

Balochistan is a major hot spot in today's political scenario of Pakistan. Right over resources has been a fundamental dimension of Balochistan issue. The province has been catering country's energy needs since 5 decades with getting very little in return. Sui gas field was discovered in 1951 and the first city in the province luckiest enough to get gas facility was Quetta after 25 years. Today after 56 years of the discovery, the province has only 3.4 percent gas users in the country. Not only that the province did not receive gas facility being pumped from their land, the

Balochistan people were also kept deprived of employment opportunities resulting from gas production and distribution. According to statistics, Pakistan Petroleum Limited (which operates Sui gas field) has only 9.7 percent and 67 percent employees from Balochistan in management and non-management cadres respectively. Similarly gas distribution company Sui Southern Gas Company (SSGC) has only 5.8 and 8.2 percent employees from Balochistan in the two cadres. The organization responsible for development of oil and gas reserves OGDC has equally poor representation of employees from Balochistan, with 3 and 10.5 percent in both cadres. Depriving them from benefits of their resources, the province has become a victim of permanent poverty. State of human development can be gauged from the Human Development Report of UNDP issued in 2003. The province had 12 districts among the last 30 districts ranked in the country on the basis of Human Development Index. Whereas the top 30 districts on HD Index included only 3 from Balochistan. A research conducted by Social Policy and Development Centre (SPDC) in 2001 revealed that Balochistan has 24 out 57 of the most deprived districts in the country. According to the research 88 percent population of the province was under high deprivation category. What would the provincial autonomy deliver to Balochistan, if they don't get right over their gas reserves and the only port in the province?

Sindh has been on the front line for demanding provincial autonomy. In terms of resource exploitation, the province remained victim since the country came into being. Muslims of Sindh were optimist that with creation of the country they will be freed from long history of slavery and oppression. Sindhi Muslims were weaker part of society during British Raj. Much of their land and properties were lying with Hindu landlords as mortgage against all time spiraling loans. Sindhi farmers expected prior right over the evacuated land and other

properties. However they were deprived of this right and most of the properties went to newly arrived migrants. Within a year's time Karachi was separated from Sindh, which was the backbone of the province's economy. According to some statistics separation of Karachi brought a loss of about 600 to 800 million rupees for Sindh. With the onset of One Unit, Sindhi's found them completely out of decision making system. One Unit started an era of exploitation of resources of rural Sindh. Sukkur Barrage which was constructed in 1932 resulted in development of 2.9 million acres of new arable land. By the time country came into being 2.2 million acres were already allotted to defense personnel from Punjab free of cost. During the period of One Unit from 1955 to 1958 people from other provinces were allotted about 152, 620 acres of land whereas Sindhis received only 123,586 acres of land. Much of the land allotted to non-Sindhis went to defense personnel from Punjab who collaborated with British Army in fighting against Hur freedom fighters. After imposition of Marshal Law in 1958 till 1963 another 212,679 acres of land was allotted to non-Sindhis, whereas Sindhi's got only 54,789 acres of land. Hence after creation of Pakistan total 367,000 acres were allotted to non-Sindhis as against 178,000 acres to Sindhis. Likewise land developed on Guddu Barrage was also distributed in similar manner. According to figures till 1971, some 142,463 acres of land had been allotted to non-Sindhis as against 103,237 acres to Sindhis. Among the non-Sindhi allottees 103,237 acres were allotted to retired bureaucrats of federal government and defense forces personnel. People displaced from Mangla/Islamabad were also allotted 37,580 acres of land.

Sindh is very rich in natural resources including coastal resources, riverine resources, minerals and specially the country's richest oil and gas deposits. According to some estimates Sindh provides about 70 percent share in taxes and

unaccounted non-tax revenues. On both eastern and western sandy and hilly strips of Sindh, several productive oil and gas fields are producing oil, gas and coal. According to statistics of 2005, Sindh has produced 65 percent oil, 70 percent gas and 43 percent coal of local production. In 2006 Sindh produced 20,369,549 million cubic feet (MCFT) of gas, which was 70% of the local production. However Sindh consumed only 10,192,560 MCFT, which is barely 50% of its production. Hence 50% of the gas produced by the provinces was used out side the province. In 2002-2003 Sindh produced 15.33 million barrels of oil, which amounts to about 60 billion rupees. However this richness of resources has resulted in very little benefit to Sindh. Major oil and gas producing areas such as Badeen, Nara desert and its northward extension (Khairpur, Sukkur and Ghotki districts), Kohistan belt (Jamshoro, Dadu, Larkana/Qambar districts) and parts of Sanghar are completely under developed and communities surrounding the oil and gas field live in primitive ages. The aforementioned HDI of UNDP placed Badeen, the major oil producing district of the country at 60th number out of 91 districts in country. Likewise only 3 districts of Sindh (including Karachi and Hyderabad) found place in top thirty districts of country on HDI. The same report placed Rural Sindh lowest among all urban and rural areas of all provinces ranked on HD Index; even lower than rural Balochistan. SPDC's annual report of 2001 "Social Development in Pakistan-Growth, Inequity and Poverty" mentions that 50 percent of districts of Sindh (all from rural Sindh) were in high deprivation category and 49% of rural population was under high deprivation.

Knowing that under present federal structure institutions like NFC and CCI are no more than rubber stamp to endorse decisions of the Centre; one wonders what the provincial autonomy would deliver to Sindh and Balochistan if they don't get prior right over benefits being accrued from their resources.

Part-II

Water and Environment

Shared Waters & Glacial Melt

This month's prospective meeting of the Abu Dhabi Dialogue Group comprising seven states sharing the rivers rising in the Greater Himalayas would be a watershed event as the group is expected to adopt a joint initiative to minimise the impact of glacial melt.

The group comprises Pakistan, Afghanistan, Bangladesh, Bhutan, China, India and Nepal. All these countries share river basins originating from the water roof of the region — the Himalayas. Bangladesh, Bhutan, India, the Maldives, Nepal, Pakistan and Sri Lanka account for more than 21 per cent of the world's population but own barely 8.3 per cent of the global water resources. This makes Chinese-controlled Tibet very important for South Asian countries. The water-rich southern Tibetan
belt is the source of two major river systems, the Indus and the Brahmaputra, as well as of several other South Asian rivers.

The 1,550km-long Sutlej which flows through India to ultimately drain into the Indus also originates in this belt, from the southern slopes of Mount Kailash. The flood plains of major rivers including the Brahmaputra, Ganges, Indus and Meghna owe their sustenance to the Himalayan ecosystem and support life for over 1.5 billion people. The Ganges river basin alone is home to about 600 million people.

As the glaciers recede, significant declines in flows will become inevitable. According to Intergovernmental Panel on Climate Change (IPCC) reports, by 2050 the annual run-off in the Brahmaputra is projected to decline by 14 per cent and the Indus by 27 per cent. The melting Himalayas pose a serious risk to the sustainability of water resources in the region.

South Asia with a large population base is susceptible to greater disasters in the wake of climate change. More than 750 million people in the region have been affected by at least one natural disaster in the last two decades. In May 2011, the secretary general of Saarc presented a draft agreement on the Rapid Response to Natural Disasters to an intergovernmental meeting of the organisation. He said that over the past 40 years, South Asia has faced as many as 1,333 disasters that have killed 980,000 people, affected 2.4 billion lives and damaged assets worth $105bn.

Very large populations in these countries owe their sustenance to water resources. Himalayan-fed rivers shape the economy and society. Hence glacial melt could have catastrophic socio-political implications for the region. Regional cooperation becomes even more desirable in the wake of hydro-meteorological disasters.

By 2050, South Asia's population is likely to exceed 1.5bn to 2.2bn. With more than 600 million South Asians subsisting on less than $1.25 a day, a single catastrophic incident could push millions into further poverty and misery. A major threat comes from the fast-melting Himalayas that dominate the monsoon dynamics in the region. The system is the lynchpin of the river network in the region.

Relentless glacial melt would also cause an ominous rise in sea levels. South Asia has a long and densely populated coastline with low-lying islands that are dangerously exposed to sea-level rise. The region has a coastline of 12,000km and a large number of islands. Hence snowmelt in the Himalayas makes the region highly vulnerable to an array of natural disasters.

Low-lying islands in the Maldives, Sri Lanka and Bangladesh are particularly in danger from rising sea levels. Major coastal cities like Chennai, Karachi, Kolkata, Mumbai and Cochin are exposed to increased risks of climatic disasters e.g. sea intrusion.

The fertile and fragile river deltas of the Indus, Krishna, Cauvery and Narmada are also vulnerable to sea intrusion. In fact, the Indus delta has lost almost two million acres of land to the sea. This would complicate matters for countries like Bangladesh, India and Pakistan that are already prone to devastating natural disasters like cyclones.

These facts make it quite clear that without regional cooperation for the management of our shared river systems and a common strategy on combating disaster, the region will continue to see all forms of hydro-meteorological catastrophes.

Saarc, the regional forum for cooperation, has yet to play an effective role in this.

Conventional security and regional trade issues normally dominate the regional cooperation discourse and tend to obscure other matters of relevance such as those of shared waters and a common front against disaster. The implications of climate change and related disasters for countries already exposed to natural calamities are reason enough to cooperate as a region to benefit and secure the lives of millions of people.

Information sharing, capacity building and prudent policies on shared water bodies are key to regional cooperation and can contribute to long-term plans to tackle the ominous effects of climate change. While almost every country in the region has developed a policy framework and strategies to mitigate and manage disasters on its own territory, in the years ahead intensive trans-boundary cooperation will become inevitable.

An important dimension in regional cooperation has been to bring China on board, as is seen in the composition of the Abu Dhabi Dialogue Group. The challenges faced by South Asian countries pertaining to shared waters, climate change and disasters are inextricably linked with China, as major rivers of South Asian countries originate from the Tibetan plateau. It is therefore of utmost importance that, along with boosting joint efforts among its own members, Saarc should also engage meaningfully with China on regional cooperation on water resources, climate change and disasters.

Daily Dawn-January 1, 2012

Effects of Climate Change

Given recent experience, one could say that Asia is under the jinx of climate change and natural disasters. Extreme weather events with debilitating intensity and frequency have brought unprecedented misery for millions in the region.

The International Union for Conservation of Nature (IUCN) held its fifth Asia Regional Conservation Forum in Incheon, South Korea recently. It was attended by more than 500 delegates from different countries. Being there, I had the chance to interact with participants from neighbouring countries. The poignant tales of rain, floods, disasters and the plight of affectees were almost similar from all the countries represented. Recent disasters experienced in Pakistan are no exception to what is happening in the region. Rising unpredictability and intensity of extreme weather events have confounded decision-makers and researchers everywhere.

The manner in which extreme weather events have affected people in parts of Asia can be gauged from a few recent examples.

In August, Bangladesh received 750mm of rain which affected nearly 200,000 people in Rajshahi. In the southeast, more than 50 people were killed due to landslides and floods while Siraiganj lost crops over 3,000 hectares and more than 20,000 people were left homeless in Cox's Bazar and Teknaf district.

In India, more than 3,000 villages of Orissa state were inundated, affecting more than two million people of which 130,000 had to be evacuated. In Bihar, rivers burst their banks after receiving the highest flow since 1975. In New Delhi, a cloud burst broke a 50-year record of rainfall within a single hour.

Similarly, Seoul in South Korea received more than 300mm rainfall in one day, the largest single-day rainfall during July recorded since 1907.

In January, Sri Lanka witnessed rains that affected nearly a million people. Climate change is predicted to render major tea-growing areas of Sri Lanka unsuitable for the crop by 2050.

In Thailand, thousands of homes were damaged and hundreds of thousands of acres of crop land was inundated due to heavy showers. In June, rains pounded six provinces of China forcing the evacuation of 0.35 million people and damaging some 33,000 houses. Water level in the Qiantang River rose to the highest level in more than 50 years.

One thing is common in all cases: past data has become almost redundant in predicting the weather pattern and planning against its impacts.

Given that Pakistan is located in this zone too, it is also bearing the brunt of the climate change phenomenon. Last year, the country witnessed an unusual shift of the monsoon from the easterly to the westerly region. This year, the lower half of Sindh received record-breaking rains. Rainfall in lower Sindh averages between 200 to 250mm, which normally occurs from July to August.

This year it came in September and the districts of Mirpurkhas, Badin and Shaheed Benazirabad received 810, 680 and 640mm of rain respectively – way beyond the normal averages. Badin received 297mm of rain just in two days, on Aug 11 and 12, which buffeted hundreds of villages along main artery of the Left Bank Outfall Drain (LBOD). The overall damages surpassed last year's figures. Due to Sindh's flat topography, the province has only 200mm fall for little more than a kilometre, as a result of which gravitational drainage to the Arabian Sea is retarded even under normal circumstances.

Incessant rain turned into a nightmare due to the pooling of water, while faulty infrastructure also compounded the gravity of the disasters.

The aforementioned countries' experiences suggest that ill-planned infrastructure, particularly in the irrigation and highways sectors, and the unregulated sprawl of human settlements, have multiplied the lethal impact of disasters. Pakistan experienced this in the earthquake of 2005 and the floods of 2010 and 2011.

The rapid assessment of the disaster caused by Cyclone Yemyin in 2007 in Balochistan and Sindh identified the Mirani dam barrier, inadequate cross drainage works and unbridled settlements obstructing natural waterways as major causes of

havoc caused by reverse flow. In 2010, encroachments in river plains were identified as a major contributing factor that exacerbated the effects of the floods. This year, the LBOD again dictated the lessons of the cyclone of 1999 and the rain floods of 2003: on all three occasions, the LBOD was identified as a major barrier in the flow of rainwater to the Rann of Katch.

The climate change rollercoaster suggests that the entire infrastructure and administrative web may need to be supplanted in the wake of the new manifestations. Prominent climate change campaigner Al Gore, said: "The rules of risk assessment are being rewritten right before our eyes. This year alone, in the United States we have had $10bn-plus disasters." What Al Gore said with reference to the US is true for much of the world now.

Pakistan's irrigation and drainage networks are also victim to the inadequacy to manage abnormal flows. The LBOD drain, for example, has a design discharge of 4,000 cusecs but this year it had to bear 18,000 cusecs. This caused a number of breaches in the drain and reverse flows in the hundreds of kilometres-long connecting network of drains. Similarly, the administrative web was vitiated by the intensity of the disaster which required several million souls to be evacuated within days and settled in camps.

The provincial and district level disaster management authorities are neither sufficiently equipped to nor skilled in managing such a scale of operations. Pakistan has recently moved up from 29th in 2009-10 to number 16 on the Climate Change Vulnerability Index. The frequency of intense weather events warrants dexterous overhauling of the infrastructural and administrative set-up. The coming years may prove even more excruciating for communities in Pakistan and elsewhere in Asia.

Daily Dawn-October 23, 2011

Root Causes of Floods

THE flood inquiry commission formed in the wake of the 2010 floods, under the Supreme Court's directive, has unveiled that a major cause of the devastating breach of Tori dyke was brazen negligence by the irrigation department.

The report acknowledges that most embankments are not being maintained properly under standard operating procedures.

Earlier inquiries revealed that senior officials responsible for flood management had not even read the manual. Likewise, the president's parliamentary committee on the monitoring of repair and rehabilitation of Sindh's irrigation works conceded that the dykes damaged by last year's floods cannot be fully repaired by the targeted timeline.

The work was initially delayed due to relief operations and later because of procedural delays in the approval of schemes.

The provincial government proposed 76 schemes costing an estimated Rs14bn to repair various dykes. However, the federal government provided only Rs5bn. Resultantly, the province was constrained to repair 41 high-priority sites to avert further disaster. Such is the bureaucratic procedure that only 17 per cent of the targeted work has been completed so far.

The fact that needs to be considered is that the repair and upgradation of dykes will not in itself guarantee full safety against even floods of lower intensity. Historical data of floods in Sindh indicates that last year's floods were not unprecedented in terms of their magnitude; however, the scale of the disaster was.

The Indus witnessed floods on a similar scale in 1973, 1975, 1976, 1978, 1986, 1988 and 1992. Clearly, the breaches of the dykes were not the sole cause of the devastation. In fact, the root cause of last year's catastrophe was the irreversibly altered regime of the river. The sustained flow of 1.1 million cusecs of water for 11 days at three Sindh barrages corroborates the fact that the obliteration of the river's regime has altered the flood pattern.

If the real causes are not addressed, the treatment of the physical infrastructure will leave the problem only half-solved.

That is not to deny that the repair of the crumbled infrastructure should be the top priority, yet failing to contemplate other dimensions would amount to lack of prescience.

Three key factors would determine the scale of future floods in the Indus river basin — climate change, deforestation in watershed areas and flood plains, and tampering with the river's regime. If these long-term issues are not addressed, the Indus river basin will remain under the perennial peril of disasters, oscillating between drought and flood cycles. The unpredictability of weather is an attribute of climate change. Considering that the problem has no localised solutions, adaptation is the only option. This involves a mixture of biological, social and technical responses. Alterations in flood plains through climatically insensitive engineering works have introduced an irreversible distortion in the river regime to which floods are a sequel.

In the years before Tarbela Dam was built, Sindh would receive a flood of 300,000 cusecs almost every year — and 500,000 cusecs in a number of years. This flood pattern shaped the river

regime over the decades and all social and administrative systems were developed in consonance with it.

However, in the post-Tarbela years, high- or medium-level floods became a rare phenomenon. This exposed vast swathes of katcha land for human settlements and agriculture. According to some estimates, approximately 500,000 acres of katcha land is under human settlement in Sindh. The population bulge in settled areas, coupled with a toothless administrative apparatus, has resulted in massive encroachments on the flood plains. Other structures such as bridges and barrages have choked flood plains with obstacles, interfering with the natural stream. Illegal local dykes to protect agricultural activity on the flood plains has also disturbed the river and caused it to swell with high waves near flood-protection embankments.

Since flood disasters are seldom examined from these aspects, most of the discourse is confined to administrative failures, cloaking the fundamental causes of the cataclysm. Before embarking on further engineering solutions such as big dams, the impact of existing engineering structures should be studied. Climate change can potentially render most engineering solutions antediluvian very soon. The conventional approach of solving problems through complicated solutions will only aggravate the situation. Prudence is required.

Pakistan's once enviably well-managed watershed apparatus is now in ruins. Unbridled deforestation in the upper reaches and in the plains of Sindh and Punjab has deprived the river of its wave-absorbing shield. Pakistan is amongst those countries that have the lowest levels of forest cover. According to some estimates, the country loses some 66,718 acres of forest cover annually. Approximately 5,683 acres of riverine forest is lost

every year. Riverine forests not only retard the momentum of floods, they also stabilise the riverbed and river banks.

In recent decades, these forests have been erased by the timber mafia in hilly areas and by land grabbers in the plains. In Sindh and Punjab, forests were systematically chopped down to clear land for agriculture and new settlements. Any serious effort to regenerate the lost forest does not seem afoot either. Yet a flood plain bereft of forest cover will remain susceptible to floods.

While taking the short-term steps, the government ought to mull over long-term remedies too. The Himalayan glacial ecosystem is negotiating its way through a climatic onslaught and increased melting is likely to generate even more ferocious floods in the catchments of Pakistan, India, Bangladesh and Nepal. This merits the consideration of integrated solutions.

Daily Dawn-21st June 2011

Dealing with Disaster

JAPAN is currently wading through the debris of the recent earthquake and tsunami. One of the world's largest economies and a technologically advanced nation, Japan boasts nearly flawless earthquake-proof structures and a highly efficient tsunami early warning system.

What lessons do the Japanese natural disasters hold for a country like Pakistan? A cursory glance would suggest that the occurrence of a disaster of lesser magnitude could simply erase our coastal areas from the map. Some facts leading to such a doomsday conclusion are mentioned as follows.

The Indian Ocean doesn't have a single tsunamograph to receive accurate data on any approaching tsunami. Tide gauges installed in Pakistan are not effective enough to issue timely warnings. The time lag between receiving a warning and evacuation could be fatally small and result in disastrous ramifications.

Pakistan's coast has hardly any scientifically developed tsunami evacuation plans in the public knowledge. Some isolated, localised drills were undertaken through international support agencies, but their efficacy is yet to be tested. Also, the simulation of real-time disaster through mock evacuations is little more than playing a video game. An actual disaster may make short work of all arrangements.

Communities settled along the approximately 1,100km long coast are scantly aware of tsunami risks in their areas. Many would not even imagine that a peacefully subsiding wave may be followed by a mightier one.

Coastal communities, especially those in tiny islands and convoluted creeks, have neither elevated ground nor enough time to escape the tides and are therefore exposed to the risk of being interred in a watery grave should a tsunami strike. Similar would be the fate of thousands of others on fishing voyages, who normally remain incommunicado for several weeks.

Coastal communities are virtually bereft of gadgets to receive early warnings. Many would know about the tsunami only when it is too late. They have hardly any awareness of the measures required to escape the jaws of death. Seldom is anyone aware of the natural warning signs of an approaching tsunami.

The institutions responsible for disaster response are in a shambles. The recent floods exposed the capabilities of disaster management authorities at the provincial and district levels. Communities' evacuation becomes an administrative nightmare during disasters.

Karachi — the largest city — is located on the coast and the present infrastructure and land-use pattern may trigger a disaster of immense proportions. The city's managers don't seem to have learnt from the experience of narrowly escaping passing cyclones in recent years. Other densely populated coastal districts and towns such as Jiwani, Gwadar, Pasni, Ormara, Sonmiani, Badin and Thatta are in the same slumber of ignorance and can be caught unawares if any disaster struck the coast.

The gravity of the risk could be judged from the fact that there are four major faults around Karachi and along the southern coast of Makran. The Makran Subduction Zone, having the potential of generating earthquakes, is among the least studied subduction zones in the world. Normally, an earthquake of over 8.0 on the Richter scale could generate a fatal tsunami in the area.

With most current structures in violation of building codes, a jolt of such magnitude would raze a city like Karachi. Any tsunami in the zone would barely allow seven to 15 minutes for communities to escape on the Makran coast. It may, however, take more than an hour to reach Karachi's coast and cause decimation, if the preceding earthquake and ensuing chaos leaves any neighbourhood standing.

The vulnerability of Pakistan's coast to a tsunami cannot be ruled out. In fact, tsunamis are not an alien phenomenon for Pakistan's coast. On Nov 28, 1945, a great earthquake off Pakistan's Makran coast generated a destructive tsunami in the ocean. Cyclones are

another potential threat to Pakistan's coast. There is empirical evidence of increased frequency and intensity of cyclones. According to a report (A Review of Disaster Management Policies and Systems in Pakistan), the coastal areas of Sindh are most vulnerable and exposed to cyclones. Historically, the Sindh coast experienced four major cyclones in a century. However, in the period between 1971 and 2001, 14 cyclones were recorded. This sufficiently indicates the severity of the risk.

Pakistan's coast is, however, blessed with a unique natural shield of mangrove forests to protect against ferocious cyclones and tsunamis. This marvel of nature has a unique root system that can absorb up to 80 per cent of wave energy. No man-made structure can compete with this natural bulwark against disaster. Japan spent $1.5bn to erect the world's largest sea wall in the city's harbour at Kamaishi, yet the city was submerged by surmounting tides.

Research carried out after 2004's tsunami shows ample evidence that those shorelines with mangrove forests suffered lesser damage during the tsunami. Imprudence, however, knows no bounds and Pakistan is at the verge of losing this protective fence. Mangrove cover along the coast has shrunk to a third of its spread in the 1970s, adding to the risk of disaster.

From satellite-activated early warning systems to elevated ground, Pakistan needs an amalgam of technology, preparedness and proper disaster planning to deal with any future natural disaster. The most rewarding investment would be in community-based risk management. It includes creating awareness in communities about the natural signs of disaster, identifying and developing escape routes and elevated ground and training volunteers on how to manage disasters.

Daily Dawn-19th April 2011

Climate Change and Future of Large Dams

Climate Change is no more a fiction but a challenging reality for thinkers, planners, professionals and decision makers in today's world. In fact decision making on development projects would no more be valid unless it takes climate change into account. Countries like Pakistan where economy, social fabric and politics are directly linked with irrigated agriculture, water resources are at the heart of most of the conflicts. Although industry and service sector have also emerged as important contributors of national economy, yet agriculture still dominates the socio-economic horizon and will continue to dominate in the foreseeable future. Hence availability and reliable supplies of water are the key factors to shape the national economy.

Possessing one of the largest and most inefficient networks of irrigation, Pakistan faces a complex challenge of managing water resources. Conflicts on water distribution at head and tail of water courses are frequent and across the provinces are older than the country itself. Construction of series of dams, link canals and barrages has caused deep rooted mistrust among stakeholders. This has been worsened by non-professional attitude of water managers coupled with ceaseless corruption and institutional inefficiencies. This is the picture of the times when climate change has not yet unfolded its consequences with full might. It's every ones guess, how the picture would look like once climate change ushered with its multifarious impacts.

Over past three decades construction of new dams on Indus River system has particularly been a major source of conflict between the upper and lower riparian. The lower riparian Sindh

province has been strongly opposing new dams on Indus. One major argument of Sindh against the big dams has been socio-environmental impacts on the province especially on flood plains and delta. Technocrats, politicians and civil society of Sindh also argue that the Indus River System does not have enough flows to divert for storage and that may ruin economy and livelihood of people in the province. Anti Kalabagh dam and Greater Thal Canal movements have specially influenced political scenario in Sindh during the recent years. Environmentalists in Sindh specially refer to massive degradation of riverine forest and mangroves eco system in Indus delta. Almost ten years back, Sindh government officially acknowledged that sea intrusion has occupied over 1.2 million acres of land in delta. Environmental degradation in Indus delta is so conspicuous that even pro-dam lobbies can not deny it. Likewise riverine katchha (flood plain) of Sindh has lost its prosperity due to depleting flows in Indus. Forest, fisheries, agriculture and livestock had been traditionally supporting rural economy of Sindh. Lack of floods due to upstream diversions have ruined this prosper economy and increased poverty to alarming levels in rural Sindh. This has also degraded precious fresh water lakes in Sindh, which provided livelihood to hundreds of thousands of people. The situation is bound to aggravate with Climate Change.

A basic misunderstanding about climate change is that it is mere rise of temperature, which is the truth in part. The actual problem with the phenomenon is unpredictable behavior of climatic manifestations such as precipitation, average temperatures etc. Climate patterns take centuries to set in. Agriculture planning is particularly dependent on the degree of accuracy of weather prediction. Frequency and quantity of precipitation has to define the water resource planning and management. It not only helps planners and decision makers to

make appropriate water allocations for various parts of country at different timings but also helps farmers in determining suitable cropping pattern in their areas. In addition to that water management infrastructure is also designed and regulated on the same basis. Indus River is well known for its erratic flows and if climate change makes it even more unpredictable, the whole water engineering and management would merit cautious revision. Regrettably the water bureaucracy of the country does not seem to be cognizant of the climate change factor. For example Water Vision 2025 of WAPDA does not take climate change into consideration. WAPDA is planning to add 10,000 Mega Watt hydro power through five mega projects by 2016. Estimates for these projects are around 20 billion US Dollars. These include Bhasha, Kalabagh, Akhori and other dams. WAPDA has not even the remotest sense of climate change impact on these plans. While Tarbela and Mangla dams are already loosing their capacity owing to heavy silting, newly envisaged dams are bound to meet the same fate as climate change has to result in generating even greater amounts of silt from Himalayas in the coming years.

Most of the flows of Ganga, Indus and Kabul rivers are generated by melting of snow from Himalayas which occur mainly during summer. Whole life cycle of people and their livelihood in the region is dependent on flow pattern of these rivers. Agriculture being major source of livelihood and economy has to suffer in case of variations in flow patterns. Unpredictability resulting from climate change on Himalayas' snow buildup or melting will have profound impact on these basins. According to "The Melting Himalayas", a research report issued by the International Centre for Integrated Mountain Development (ICIMOD) "the Himalayas region, including Tibetan Plateau, has shown consistent trends in overall warming

during the past hundred years. Various studies suggest that warming in the Himalayas has been much greater than the global average of 0.74 degree Celsius over the last hundred years. Many Himalayan glaciers are retreating faster than the world average and are thinning by 0.3-1.0 m/year. The rate of retreat for the Gangotri over the last three decades was more than three times the rate during the preceding 200 years. Most glaciers studied in Nepal are undergoing rapid deglaciation. In the last half century, 82 percent of the glaciers in the western China have retreated. On the Tibetan plateau the glacial area has decreased by 4.5 percent over the last 20 years and by 7 percent over the last 40 years." This trend of glacial retreat clearly indicates that the rivers receiving their flows by snow melting will experience higher flows for initial period followed by continued decline. According to the same report, various climate change scenarios will have varied impacts on flow pattern. "One concludes that with a two degree Celsius increase by 2050, 35 percent of the present glaciers will disappear."

It does not need brains to conclude that flow patterns in major rivers fed by Himalayan melting would become more erratic in the years to follow. Typically designing of dam takes into account historical flow data and assumes that almost the same will be maintained in the subsequent years. This assumption will no more be valid due to climate change thus questioning the basic equations of dam feasibility. A report of ICIMOD mentions that the temperatures on Indian sub continent are likely to rise between 3.5 to 5.5 degree Celsius by 2100. Extreme weathers are likely to occur due to climate change. In case of unpredictably higher floods, the dam safety would be the biggest challenge as dams are designed to withhold certain peak floods. In exceptionally high floods, the dams can either burst or their backwaters may inundate areas outside its water boundaries. In both cases loss of life and property can attain

horrible proportions. Defrost and heavy flows will bring more debris and can reduce the dam life by accelerated silting. Himalayas are young mountains and their rate of erosion is very high. Changes in precipitation pattern will have impact on silt flows in rivers. Warsak dam was completely silted and the Tarbela and Mangla are told to have lost almost one third of their capacity. Who can guarantee on earth that the new proposed dams would not meet the similar fate? Technical Paper VI "Climate Change and Water" of Intergovernmental Panel on Climate Change also highlights this fact. It reads "Generally the frequency of occurrence of more intense rainfall events in many parts of Asia has increased, causing severe floods, landslides and debris and mud flows (P-86)."

Similarly low flows and droughts will also question the justification of investment of billions of dollars if the dams remain underperformed. Construction of new dams promises to bring more land under plough which requires additional investment in extension of irrigation network and land development. If the dams could not deliver what they promised, the whole investment will end up in generating new conflicts. Considering the above facts it would be reasonable to conclude that huge investments on dam structures will be at risk in the context of climate change. Miller, K.A, S.L. Rhodes and L.J. Mac.Donnel suggest in their document "Water allocation in a changing climate: institutions and adaptations" that "Water infrastructure, usage pattern and institutions have developed in the context of current conditions. Any substantial change in the frequency of floods and droughts, or in the quantity and quality of seasonal timing of water availability, will require adjustments that may be costly, not only in monetary terms but also in terms of societal and ecological impacts, including the need to manage potential conflicts between different interest groups. Since Pakistan is located in a region prone to severe climate change

impacts, it would be pertinent to recommend that whole water sector management regime should be revisited in the light of climate change phenomenon. Climate change will have significant impacts on water resources in the region therefore all water engineering projects need to take this new dimension into account. Projects like large dams on Indus River System need a thorough understanding and research on climate change impacts before embarking upon. This may call for searching more viable options of water conservation.

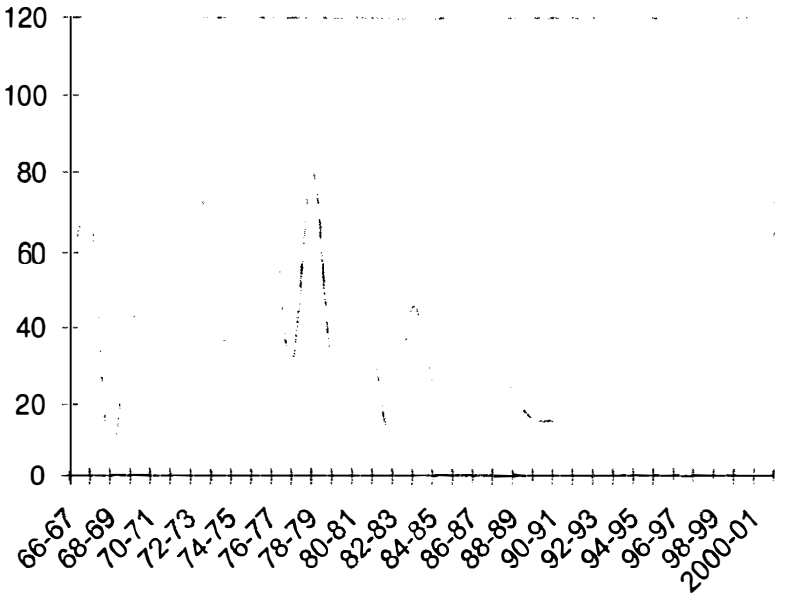
Daily Dawn-9th March 2009

Climate Change and Disaster in Indus Delta

Sindh Assembly in a recent session adopted a consensus resolution demanding from the federal government to take urgent steps to check sea intrusion in coastal districts Thatta and Badin. Conservation organizations, Environmentalists and civil society have been highlighting the plight of coastal areas of Sindh, however the same has never been given serious attention as the decision makers of the country have been considering flow down stream Kotri as waste. Environmental Flow is an alien concept to our decision makers due to poor environmental literacy among them. Member Sindh Assembly from Badin Dr. Sikandar Mandhro while presenting this resolution revealed that sea has occupied 1.3 million acres in the two districts and it continues to eat 80 acres a day on an average. Six sub divisions of Thatta viz. Ghora Baari, Kharo Chaan, Keti Bunder, Shah Bunder and Jati are the worst hit. These areas were historically prosperous due to extensive agriculture and trade activities. Now these areas are counted

among the poorest parts of the country. The drastic change has not ushered over night due to any natural calamity, it has been rather creeping like slow poison and decision makers have been witnessing it with apathy. A significant part of over 2 million people of the two districts have been paying the price of wrong priorities and ignorance on part of decision makers.

The Water Accord of 1991 prescribed at least 10 Million Acre Feet (MAF) water to flow below Kotri barrage to maintain fragile eco system of Indus Delta. However this flow was seen only during high flood years when surplus was to be drained below Kotri any way. In low flow years, Delta remained thirsty. The flow pattern below Kotri during post Tarbela Dam years (shown in the graph) narrates the gradual unfolding of environmental disaster in Indus Delta.



Annual average flow below Kotri during 1999-2004 was approx 6.8 MAF and during extremely dry years of 2000-2003 it was only

2 MAF. Year 2001 shows the lowest flow which was less than One MAF. In year 2000-01, Government of Sindh officially recognized that 1.2 million acres of land in Thatta and Badin has been occupied by sea. Eight years past with almost similar flow conditions, the amount of land under sea must be much more than 1.2 million acres now. Sea intrudes mainly in three ways. Sea water erodes land and gradually submerges large tracts of land or it may temporarily inundate land during high tide (which eventually submerges the land in years to come) and the invisible form of intrusion is sub surface creep, which makes the ground water aquifers unfit for human consumption. Several villages in coastal areas migrated mainly because their aquifers became non-drinkable. Some independent studies reveal the fact that sub surface intrusion of sea on Sindh coast is even deeper and longer than the surface creep. Technology to monitor the trend of sea intrusion both above and below surface is commonly available, what is not available is sadly the political will.

The most important reason triggering sea intrusion is the shortage of fresh water flows from Indus into Arabian Sea. Fresh water flows into sea has multiple benefits ranging from resisting cyclones and Tsunamis to maintain salinity in estuaries to a level where the eco system can support aquatic life such as fish and mangroves. Due to shortage of fresh water flows, creeks have become inhospitable for mangroves and fish. According to a study "Consequences of sea water intrusion in Sindh" conducted by Indus Institute for Research and Education" creeks of Arabian Sea have become more saline than the sea itself. Salinity in creeks has reached 3.8 to 4.2 percent against 3.6 percent of the Arabian Sea. Salinity of water along the shores of Karachi at present is 35,500 to 36,900 parts per million (PPM) and has increased to 41,000 to 42,000 ppm in back waters and tidal creeks. Draft Final Main Report of "Study on Water Escapages Downstream of Kotri Barrage to Address

Environmental Concerns" conducted by Kotri Barrage Study-II Consultant Group in 2005 recommends that at least 15 MAF water should reach mangroves to maintain their present state and improve their environmental conditions. Conservation of this natural eco system creates a natural shield against climate change related natural calamities on one hand and ensures food security for masses, mainly poor (over two million in case of Sindh coast) on the other. Indus delta eco system owes its sustenance mainly to mangroves eco system, which is rapidly vanishing due to drastically reduced fresh water flows into sea. Till late 70s the mangroves cover was approximately 260,000 hectares, which reduced to 160,000 hectares in early 90s. Studies conducted by WWF put the figures to a shocking low of about 80,000 hectares in 2001.

As no physical monitoring of this disaster is being carried out therefore impact monitoring becomes a far cry. How it would have impacted lives of millions of mainly poor communities in coastal areas; does not probably even feature in the information menu of our decision and policy makers. Upstream beneficiaries of diversion of Indus water do not even consider coastal communities as affectees of the large projects of water sector. People displaced from construction site are generally considered as affecttes for compensation. In fact the communities in delta pay even higher price of these projects and they have to share larger part of sufferings resulting from water diversion projects. However project implementing agencies never considered delta people as affectees. After the country came into being, a number of huge water sector development projects including two big dams Tarbella and Mangla along with Jinnah, Kotri, Marala, Taunsa and Guddu barrages have been implemented without taking into consideration of their potential impact on downstream areas. While projecting figures of crops and electricity generation as

benefits of dams and barrages, there is hardly any study which can comprehensively determine the level of damages resulted from these projects. People in flood plains of Sindh (Kachho area) and downstream Kotri have lost their livelihood and poverty is at its highest in these areas

Data of post Tarbela dam shows steady decline in flow below Kotri except in high flood years when escapage below Kotri was unavoidable. During negotiations between Pakistan and India over water dispute with the assistance of The World Bank, both countries agreed that minimum 17 MAF water has to be discharged into Arabian Sea. This quantity was reduced to mere 10 MAF in 1991 accord. "Study on Water Escapages Downstream of Kotri Barrage to Address Environmental Concerns" conducted by Kotri Barrage Study-II Consultant Group in 2005 reduced it further to 8.7 MAF. Interestingly the initial draft of the same study recommended 20 MAF flows (including 15 MAF only for mangroves) for Indus Delta. However this figure was later altered to 8.7 MAF due to unknown (but better understood) reasons. Government has been claiming average flow below Kotri has remained 35 MAF. Even if this figure is accepted, the strange outcome is incessant disaster in the Indus delta. Simple logic suggests that even 35 MAF has not helped in improving environmental conditions of the delta therefore that should be considered as the least requirement of flow even if the present level of disaster is accepted to continue. On this basis, environmental improvement of delta needs even higher flows. According to "Consequences of sea water intrusion in Sindh" conducted by Indus Institute for Research and Education" until 1960s land was advancing into sea at the rate of 4 km per century but now the course has reversed and near 2 million acres of land has gone under sea in the matter of few decades. This reflects on the priorities of policy makers. Indus delta originally occupied an area of about

600,000 hectares, consisting of creeks, mudflats and forests between Karachi in the north and the Rann of Kutch in the south. There were 16 major creeks making up the original delta, but due to reduced flows below Kotri, only the area between Hajamro and Kharak creeks now receives water from the Indus, with one main outlet to the sea, Khobar Creek. The active delta is now only 10 per cent of its original area. It would be pertinent to suggest that a comprehensive study should be conducted to assess ecological and socio-economic impact resulted from present dams and barrages before deciding construction of new big dams like Basha.

Climate Change phenomenon is another upcoming challenge bound to complicate the situation further. Since 1850, sea level has risen by 165 mm. According to Intergovernmental Panel on Climate Change (IPCC), the global world temperature has increased by 0.6 ^{0}C over the last 100 years and is forecasted to rise further by 1.4 to 5.8 ^{0}C before the present century ends. This will trigger melting of glaciers resulting in further rise in sea level. Although it may bring more water to Indus Delta but after melting phase, climate change will bring reduce Indus merely to a rain fed river. It will alter the whole dynamics of economy, environment and life around Indus. This is high time that our decision makers seriously work on possible impact of Climate Change in the country and especially in Indus Delta. Ignoring this fast approaching disaster would have catastrophic implications.

Sindh Assembly resolution demands construction of dikes to stop sea intrusion as an immediate measure; however it would bring only partial relief by stopping surface intrusion. Sub surface intrusion and seepage through dikes would continue unless sufficient flow is not maintained below Kotri barrage.

Daily Dawn-15th December 2008

Climate Change and Vulnerability of Sindh Coast

Our planet has experienced very unkind climatic patterns in recent years. It's not that the human race is experiencing climatic wrath first time in the history but the alarming side is its frequency, intensity and growing degree of unpredictability. According to scientific assessments of the Intergovernmental Panel on Climate Change (IPCC), the global world temperature has increased by 0.6oC over the last 100 years and is forecasted to rise further by 1.4 to 5.8oC before the present century ends.

Developing nations, specially in this region are more vulnerable to impact of climate related disasters. It's mainly due to weak governance, lack of desired infrastructure and technology, prevailing scale of poverty and more importantly the lack of leadership having vision and commitment to face and address this mounting threat.

Coastal areas are particularly the most vulnerable areas. With increasing temperature glaciers and icecaps are melting fast and raising sea levels. As the sea level rises, salt intrusion, tidal vector, inundation of low lying areas and cyclones also increase. It also makes the sea more aggressive and disastrous. A Greenpeace report warns that left unchecked climate change could lead to global temperature increases of between 4-5°C, unleashing a barrage of impacts that will drive mass migration in India, Pakistan and Bangladesh. A recent assessment indicates that tropical storms will indeed increase in frequency and/or intensity due to climate change (Trenberth 2005).

Tsunami Experience: Recent experience of Tsunami which hit Asian coasts on 26th Dec 2004 has made eye opening

revelations. The impact was so immense and immediate that left no time to avoid the disaster. Early warning systems are being developed but still time margins between the warning and the disaster are too small to evade it. Tsunami proved that the only reliable shield against coastal disasters is nature. Wherever human being damaged this shield, Tsunami took its toll. Post disaster research carried out along the Tsunami-hit coast has surfaced several evidences that conservation of natural resources particularly mangroves and coral reefs is the best protection against climate change related disasters in coastal areas. Mangroves forests are the most effective wave energy absorbents. Research has shown mangroves are able to absorb between 70-90% of the energy from a normal wave. Amongst them the most important genera are Rhizophora, Bruguiera, Avicennia, Ceriops, Sonneratia, Lumnitzera, Aegiceras and Nypa. Mangroves provide double protection - the first layer of mangroves with their flexible branches and interweaved roots hanging in the coastal waters absorb the first shock waves. The second layer of tall mangroves than operates like a wall withstanding much of the wave energy.

It also happened earlier in Bangladesh. In 1960, a tsunami wave hit the coast in an area where mangroves were intact. There was not a single human loss. These mangroves were subsequently cut down and replaced with shrimp farms. In 1991, thousands of people were killed when a tsunami of the same magnitude hit the same region.

Ratan Kar and R. K. Kar of Birbal Sahni Institute of Palaeobotany, in their paper "Mangroves can check the wrath of tsunami" shared some insightful observations. According to the paper, "the data from Tamil Nadu. Kanyakumari, Nagapattinam, Pondicherry and Chennai have the dubious distinction for having maximum number of deaths and destruction of

properties. All these places have high density of population which led to the virtual disappearance of mangroves from the coast over several decades. But Pichavaram and the adjacent region near Chidambaram in the Cauvery delta have minimum causalities because of the thick mangrove vegetations which made the tsunami less lethal. This place is situated between Nagapattinam and Pondicherry and the tsunami might have struck it with the same lethal speed, yet it escaped mass destruction."

In a similar example, Myanmar and Maldives suffered very less from the killing spree of the tsunami because the tourism industry had so far not spread its tentacles to the virgin mangroves and coral reefs surrounding the coastline. The large coral reef surrounding the islands of Maldives absorbed much of the tidal energy and restricted the human loss to around 100 dead.

In another research, The World Conservation Union (IUCN) compared the death toll from two villages in Sri Lanka that were hit by the devastating giant waves. Two people died in the settlement with dense mangrove and scrub forest, while up to 6,000 people died in the village without similar vegetation.

The research has also proved that short term economic benefits at the cost of natural resources are outweighed by climate change disasters.

Since the 1960s, the Asian sea-coast region has been plundered by the large industrialised shrimp firms that brought environmentally-unfriendly aquaculture to its sea shores. Shrimp cultivation, rising to over 8 billion tonnes a year in the year 2000, had already played havoc with the fragile eco-systems. The "rape-and-run" industry, as the Food and

Agricultural Organisation of the United Nations (FAO) once termed it, was largely funded by the World Bank.

Nearly 72 per cent of the shrimp farming is confined to Asia. The shrimp farming is carried out by removing mangrove in swamps. Since the 1960's, for instance, aquaculture in Thailand resulted in a loss of over 65,000 hectares of mangroves. In Indonesia, Java lost 70 per cent of its mangroves, Sulawesi 49 per cent and Sumatra 36 per cent. In India, mangrove cover has been reduced to less than a third of its original in the past three decades. Between 1963 and 1977, the period when aquaculture industry took roots, India destroyed nearly 50 per cent of its mangroves. Whatever remained of the mangroves was cut down by the hotel industry. In the past two decades, the entire coastline along the Bay of Bengal, Arabian Sea, and Strait of Malacca in the Indian Ocean and all along the South Pacific Ocean has been a witness to massive investments in tourism and hotels. All this greed took the toll of nature and in 2004 nature hit back leveling off all the profits accrued through myopic approach of development.

Having grown tenfold in the last 15 years, shrimp farming is now a $9 billion industry. Shrimp consumption in North America, Japan and Western Europe has increased by 300 per cent within the last ten years. The massive wave of destruction caused by the Dec 26 tsunami in 11 Asian countries alone has surpassed the economic gain that the shrimp industry claims to have harvested. With at least 150,000 people dead it also brought unprecedented socio-economic losses. World governments had to pledge US $ 4 billion in aid. This does not including the billions that are being spent by relief agencies. If all costs added, economic benefits of unwise development look too tiny.

Vulnerability of Sindh Coast: Sindh has over 350 kms long coast, rich in natural resources. The coastal areas of Sindh are most vulnerable and exposed to cyclones. According to some reports Sindh coast had an average of four cyclones in a century. However the frequency and intensity has increased manifold and the period 1971-2001 records 14 cyclones (A Review of Disaster Management Policies and Systems in Pakistan for WCDR 2005). The cyclone of 1999 in Thatta and Badin districts wiped out 73 settlements, and resulted in 168 lives lost, nearly 0.6 million people affected and killing of 11,000 cattle. It destroyed 1,800 small and big boats and partially damaged 642 boats, causing a loss of Rs 380 million. The losses to infrastructure were estimated at Rs750 million. Unofficial sources put these figures on much higher scale. Last year another cyclone Yemen narrowly missed Karachi coast and brought horrible disaster along Makran coast.

Sindh coast has been rich in mangroves forests but the recent decades have witnessed massive decline in mangroves forest due to shortage of environmental flows to Indus Delta. Till 19th century the delta would receive annually some 150 MAF water from the river system. This amount was gradually chopped off due to upstream developments in the shape of a series of dams and barrages. After the country came into being, a number of huge water sector development projects including two big dams Tarbella and Mangla along with Jinnah, Kotri, Marala, Taunsa and Guddu barrages have been implemented without taking into consideration their downstream climate change impacts. The water accord of 1991 provisionally guarantees 10 MAF subject to further studies to establish the actual need to maintain the delta eco-system. However ever since the accord came into place, the quantity of promised flow has hardly been maintained. This clause of the accord was neglected to the extent when in 2000-2001 the delta received less than one

Million Acre Feet water. This reduced fresh water flow has also reduced inflow of nutrient loaded silt, which supports mangroves growth. Till late 70s the mangroves cover was approximately 260,000 hectares, which reduced to 160,000 hectares in early 90s. The recently conducted studies by WWF put the figures to a shocking low of about 80,000. In addition to that sea intrusion has spoiled around 2 million acres of fertile land in Thatta and Badin.

In the recent years Sindh government and City Government of Karachi has kicked off a massive waterfront development program on Karachi coast. The illusive development also includes construction of a new city at Bundaar and Dingi islands, where few of the remaining healthy tracts of healthy mangroves are struggling for their survival. Another Dubai style city named as Sugarland city is being planned at Hawksbay. These developments are bound to make Karachi coast more vulnerable to climate change impacts. While Tsunami has forced governments to consider investing into natural resources, our decision makers are investing into disasters without realizing that cyclones, hurricanes and Tsunamis are not too alien to our coast.

Daily Dawn-14th April 2008

Addressing Coastal Poverty with Wrong Approach

M/S ANZDEC Limited, New Zealand has recently issued Interim Report of Asian Development Bank's "Sindh Coastal and Inland Community Development Project". The report has two volumes viz. Main Report and Appendixes. Technical Assistance of ADB - as described in point.2 of the Executive Summary-intends to alleviate poverty and improve the environment in coastal

Karachi and in eight coastal talukas of Thtta and Badin. While setting the context; the report describes the situation as:

"In the costal areas the uncertainty of water and the mismanagement of water resources has cause enormous hardship and there is little prospect of change at least in the short to medium term. It is not just the physical consequences of less water but the ensuing social, economic and environmental damage stemming from failure to adequately foresee or provide for the consequences" (Vol.; 1, Executive Summary; Point-4, page-iii)

In the introduction of report scope of the report has been described as under "Formulation of an investment project able to (i) address or at least contribute towards improving the condition of coastal and marine fisheries and related sources and (ii) increase incomes of coastal communities" (Vol-1, Page-1 Introduction). Coastal Development Authority has been assigned the task of managing day to day project matters for the Executing Agency; the Sindh Government Planning and Development Department.

Coastal strip comprising of Thatta and Badin are among the worst poverty hit areas of Pakistan. Not centuries but only few decades back these were among the most productive parts of the country and in English era these were the thriving port sites of the area. Quoting the report "the arid coastal environment along Sindh has degraded over the last 50 years. This has been mainly due to drastic reduction of Indus River discharge, increasing salinity caused largely by poor drainage and sea water intrusion" (Point 46, Page. 10).

Cause and Consequence

With construction of series of dams and barrages Indus delta has suffered the worst environmental consequences due to steeply

declined freshwater release below Kotri barrage; sadly termed as "wastage" even by the highly responsible people of the country, without accounting the damage it has caused to once thriving coastal communities and economies. After inflicting a painful unending socio-economic death to coastal communities some prescriptions have been suggested from time to time to keep them breathing a little longer. The report rightly phrases such attempts as "regrettably most had at best found it difficult to produce meaningful results....most had sought to deal with the more obvious manifestation of needs. In other words they responded to "consequences" rather than "causes". It goes on saying very rightly "until the fundamental changes repeating the same process can only produce the same outcome" (Point8-9, P. iii-iv; Executive Summary)

A critical review of the report however concludes that regrettably the ADB report itself ends up at "repeating the same" and "responding consequences rather than causes".

Two volumes of the report spread over more than 300 pages keeps hovering around the actual "cause" but like always prescribing the cure to "consequences". As mentioned in the beginning that the context given in the report is close to reality and narrates the whole story in few words. If one keeps following the footprints of disaster in coastal areas, one reaches mainly to two reasons i.e. shortage of fresh water inflow and exploitation of local resources without benefiting the local communities. Since both are politically volatile issues so ADB report very intelligently sidetracks from the both; however confessing with due honesty that "very clearly the project is unable to tackle the largely policy issues of water management simply because it is an area fraught with national political implications." (Point-14; Page. 3; Introduction). So the whole story of ADB report unfolds with clear departure from the

"cause" to the "consequence". Hence the 50 million US$ loan of ADB is bound to go direct in the bottomless pit; a graveyard of donor funded development projects which often adds little to the development of people and more to the heap of dirty debt.

There is hardly any dichotomy of opinion that the root cause of poverty and associated problems in this part of world has a very strong and obvious link with bad policies, bad politics and overall bad governance. Politically skewed decision making in favor of "the powerful" has been the major threat to sustainable development in this country. The case of disaster in coastal Sindh is just one manifestation of this "cause". No one has witnessed any other major disaster in coastal areas over recent decades other than the environmental disaster ensuing from sharp decline in flow of fresh water; letting sea to creep in. We don't need to explain the prosperity of these areas out of this report as it sufficiently throws light on the same in page 201 of Vol.2. It reads "Keti Bandar and Shah Bandar in Thatta district were important towns...Shah Bandar, for example was the major port for Sindh before the advent of the colonial state and the regulated port of Karachi. The incursion of sea, however, has virtually wiped Shah Bandar from the map and surrounded Keti Bandar with a unique sea defense bund and a road that is the only connection with the main land. Both townships are now greatly diminished in terms of population and natural resources". There is no evidence of any epidemic, earthquake, super flood or any other disaster reducing these port towns to ghost villages; except the one mentioned in the above paragraph, the "sea incursion". The report further confirms this as "the economic environment is largely driven by availability of water, which is itself more a political than a technical problem Point-16; Page. 77). Hence the "cause" is very clearly established yet the prescriptions given in the report does not

aim to address it because "it is an area fraught with national political implications".

As a result of this detour from actual problem ADB prescriptions-like many others in the past-are reduced to mere cosmetic measures. It is an attempt to cure cancer with massage. ADB's limitations are obvious since it is working in support of government; the government which believes that the fresh water flow below Kotri is a waste.

The report does not refer Sindh Government's reports (substantiated by credible civil society organizations like IUCN and WWF) that sea intrusion has encroached over 1.2 million acres of land in coastal parts of the two districts. Independent sources put these estimates as high as 2 million acres. The ADB report doesn't mention that alone this part of disaster is enough to devastate coastal communities and their sufferings can not be redressed through short term relief project. The report also does not recognize that the actual "cause" is very much existent and progressing continually. Hence the investments on other projects is like pouring water in a broken pitcher, which needs plugging the hole first. Looking at the development in this broader context any thing falling short of addressing policy and political issues, will always be limited to treating the "consequence" and evaporate with the passage of time doling only the candies of short term impact.

Moving further from the "cause" let us have a look on what prescription has been proposed to address the "consequence" by ADB this time.

Institutional Reforms

A major emphasis of the report revolves around institutional reforms in Fisheries department and institutional strengthening of

Coastal Development Authority to carry out the ADB loan of 50 million US$. Institutional reforms have been the most favorite prescription of all big donors. There is no denial to the fact that our public sector institutions are riddled with inefficiencies, lack of coordination, weak service delivery, chronic corruption and absence of accountability and stakeholder participation. All these diseases need proper cure to make them a viable department. Yet all this is easy said than done. This pessimism is not so baseless; it draws credentials from the past attempts of even bigger magnitude by the same donors. Way back to late 90s there was a drum beating of institutional reforms within water sector institutions mainly Irrigation departments and WAPDA. Under 785 million US$ National Drainage Program, The World Bank and Asian Development Bank allocated over 57 million US$ for institutional reforms. The NDP ended up even further deteriorated institutional situation in Irrigation department; where half cooked Provincial Irrigation and Drainage Authorities (PIDAs) are now breathing their last. Sindh chapter is without salaries since more than 8 months. The NDP example should have been a lesson for ADB, which still wants proceeding with yet another experiment in the laboratory of Pakistan. The report on page-16; point 77 rightly quotes Einstein that "repeating the same process and expecting the different outcome amounts to insanity". I served on the provincial steering committee of NDP as Civil Society representative for about 2 years and noticed the following reasons for failure of institutional reforms in NDP.

- Owner's dis-ownership. Irrigation department officials were one voice against these institutional reforms. Even the then Secretary of Irrigation Department would not hesitate expressing his dis-ownership of the reforms in steering committee meetings. The reforms were always considered as

external agenda and never viewed as a desire from within. The fate of reforms was obvious.

- Interestingly with all open opposition to reforms; the same department was assigned the task to transform Irrigation department in PIDAs. Senior retired bureaucrats of the department were made top managers of the reshaped body; which took reforms one step forward and four steps backward. Obviously horse can not become a friend of fodder. Eventually PIDAs were reduced to the stock of old wine in the new bottle.
- There was no clarity of post-project continuity of these reforms. Once NDP files were put in the shelves; PIDAs are left high and dry. There is hardly any budget and human resource available to carry forward the reforms. As a result of that the reformed shape of Irrigation department is now badly deformed.
- There was no adequate representation of civil society in NDP. The provincial steering committees would have only one representative from civil society; who remained often paralyzed before more than a dozen government officials. In practical it was a mere cosmetic representation.

A major donor of NDP, The World Bank also now indirectly puts onus of the failed reforms on government of Pakistan, as donors normally do in failure cases. The reasons for this failure mentioned in a recent World Bank document Report No. 34081-PK are a food for thought in this context. Some of them are quoted below.

- Overly complex and ambitious project design that failed to address the realities of political economy

embedded in the profound changes the reforms sought

- Lack of ownership, particularly by the PIDs who saw the reforms as a threat to their existence and monopoly on water distribution, and offered immense resistance and inertia to the changes the reforms sought to bring.
- Lack of champions both at the working level and at the political levels
- Focus on organizations not on instruments and incentives;
- Lack of attention to sequencing, prioritization and the "rules for reformers".
- Lack of a detailed strategy for implementing the key elements of the reforms

The proposed reforms in Fisheries sector need greater deal of learning from past failures before embarking upon another reforms adventure.

This may also be noted in mind that no institutional reform can yield results without associated policy reforms; which is not adequately emphasized here. The report rightly says that "the power and influence of the middleman and moles is so pervasive that the poor fishermen of Badin and Thatta will remain poor, whatever fisheries infrastructure is put into region." Ironically the report does not talk adequately about policy reforms, which falls in the category of the frequently forgotten "cause". For example the report does not mention that powerful sea lords, illegal trawling, use of banned nets, exploitative contract system and fishing rights to Rangers in Badin and Thatta which are among the major "causes" of the poverty of coastal `fishermen. Without addressing these serious policy and operational issues, no institutional reform will put

any crack in the strong poverty wall surrounding the livelihood of poor coastal communities.

No one knows what is latent in the proposed reforms for fisheries department. It would be pertinent to suggest that before taking this leap forward ADB should take a realistic account of past failures of institutional reforms. Probably there is nothing wrong with the need of reforms but one need to look into the ground realities. Operation theater need to be fully equipped with "during operation" complications and "post operation" consequences; without which patient will always be prone to get worsen than the present condition.

Stakeholder Voice

The ADB report refers to the active consultation carried out to shape the document and the proposed solutions. Public consultation is considered as a tool to diagnose the problem at ground level and understand the actual community needs to frame the projects. The process becomes ceremonial if experts have to go by their own judgment and treating people's needs secondary. In this case the situation is not much different. During public consultation; the stakeholders specially local communities identified drinking water supply, health facilities, link roads, teachers, management of irrigation water and mitigation of losses from the system, livestock improvement as their major needs. All these community suggestions are vetoed one by one in the last 10 pages of volume, I of the report. In stead new propositions based on "expert" approach have been prescribed. Most surprisingly need of the roads has been rejected on the basis that fishermen have sufficient access to their landing sites. It is every one's knowledge that fishermen don't need roads only to reach landing sites. Availability of roads leads to overall prosperity of communities thus helping to

alleviate poverty. Road network also reduces vulnerability of communities in the wake of cyclone, flood and other disasters. Constructing roads would bring multifarious advantages to coastal communities.

Approach towards Civil Society

Sadly a deaf ear has been turned to the civil society views and their opinion has been over ruled under typical expert approach. The consultants do not consider civil society voice worth contemplating since it does not have any good feeling about the civil society itself. Probably that is the reason for using quite derogatory language for civil society organizations. A critical comment on civil society says; "after examining the situation it is clear there are various levels of capacity and focus within civil society. Some of them are little more than vehicles for mercenaries and political activists". (Point 83; Page.17). With these feelings this project will hardly respect civil society inputs and will become a playing field of experts as happened with another mega project in Badin district; called Left Bank Outfall Drain (LBOD).

LBOD experience

It would not be out of context to refer here a mega failure of the same donor's funded project. ADB was the second largest donor after the World Bank in the LBOD project. It provided 122 million US$ under a loan ADB-700-SF-PAK, signed on 14th December 1984. The ADB was also a major donor of NDP where it funded a loan of 285 million US$. Both big projects suffered a miserable end and no one except donors and WAPDA appreciates them, not even the Sindh government circles. Stakeholders at the time of design raised severe concerns on the design and approach adopted for effluent carrying canal of

LBOD called "Tidal Link Canal". Experts did not pay heed to the ignorant commons and invested about 800 million rupees alone on this single and the most critical structure of LBOD. The structure badly failed within very short span of time and was in fact a major cause of the devastation resulted by 1999 cyclone in Badin. No wonder people of Badin, specially of the coastal parts consider LBOD as a major cause of their resource degradation and resulting poverty. However the report no where admits that ADB has actually been the part of problem now attempting to become part of solution through this TA.

The report also sidetracks from political issues other than water shortage. In case of Badin, the base of poverty is directly linked with exploitation of mineral resource of Badin. According to Pakistan Energy Book-2003, Badin produced about 27,822 barrels oil per day, amounting to approximately 53 billion rupees of the year. In 2003 Badin contributed over 43% of local crude oil production. A district with such an enormous resource lying beneath its soil appears highest on deprivation index of 16 district of Sindh. Details can bee seen in a research report (appeared in 20002) of a renowned Sindh based research organization "Social Policy and Development Center". Badin also stood 61 out of 91 districts surveyed for Human Development Index by UNDP in 2003. Details can be seen in Pakistan National Human Development Report-2003 of UNDP. This is another "area fraught with national political implications", which obviously ADB sponsored report would never want to capture. It is more than evident that even if Badin is returned a fraction of its oil production it will never require charity of donor TAs. Hence the actual "cause" of Badin's poverty is lying else where, rest is all dealing with "consequence" only.

Fishermen in Badeen have also been suffering at the hands of Rangers. Recently costal fisher communities launched a protest

campaign against the atrocities by the rangers. According to the costal communities, the rangers have been a major "cause" of snatching livelihood of poor costal fishermen.

Water bodies, namely Shakoor dhandh, Adda Khan, Shaikhani Ghari and Sim Nullah were given to the Thar (Indus) Rangers Badin for augmentation in 1977. But in 1994, permission was cancelled. In early 1980s, the rangers had requested to the government for permission to its jawans, posted in Badin for law and order duties, to catch fish for their consumption. The permission was granted. The rangers started to occupy lakes and ponds in the Badin district one by one and at present they had fully occupied over a dozen big coastal lakes, a large number of network of small ponds, and private land. The Thar Rangers appointed the contractors and the fishermen were forced to sell their fish and shrimp catch to these favored people. They offered contractors rock-bottom prices for their catch. As a result the big-sized shrimp that was sold in Karachi for Rs 300, the local fishermen were forced to sell this shrimp between Rs 15 and Rs 20 to the contractor. The local fishermen were not even allowed to take fish for their families. The document does not treat this big policy issue as a "cause" of loss of livelihood of poor fishermen. Contractor system also needs thorough discussion since it is also a major policy issue resulting in loss of livelihood for coastal communities. All such important "causes" have been given secondary importance in the report. In fact these are the areas having strong bearing on economy of coastal communities and need to be addressed with due seriousness if some one is really committed to provide sustainable livelihood to the coastal communities.

In stead of dealing with these core issues, some projects have been suggested to improve livelihood of coastal communities. The document suggested a novel approach of introducing pilot

integrated mariculture pond system in coastal areas. The mouth watering projections of this model tell that if successful it may be expanded over an area of 25,000 hectares benefiting 50, 000 people in the area (Page.136, Vol. II). Interestingly the start up cost of this setup has been suggested as USD 1,800-2,300. Considering the level of poverty prevailing among the coastal communities this is not a small amount. Who will benefit from this model, particularly if the pilot becomes successful and expansion takes place; only commercial investors will be able to pour money in the business. The proponents of this idea apparently wanted it to benefit local people but surely it can benefit any one and every one other than the poor coastal communities. Had the proponent shared this idea with much condemned "vehicles for mercenaries and political activists"-the civil society; some saner views would have been received and might have been considered useful to revisit the idea.

While discussing the part of coastal Karachi; the ADB report does not through any light on the migrants of delta, now settled in coastal villages of Karachi. They are the unrecognized affectees of development madness over Indus. Like all others ADB report also doesn't count them for any special consideration. No provision has been made in the proposed projects to lessen the miseries of those displaced people who lost their livelihood to sea incursion.

It would be worth mentioning that any approach sidetracking from painful political realities and policy issues will not bring real changes in the lives of people. No doubt short term benefits are worthwhile but if they come through huge loans and deliver no substantial results then they will hardly add any value to development in terms of sustainability.

In conclusion I would like to put forward few suggestions to the ADB managers for their consideration.

- The report should take a critical stock of actual "causes" of resource degradation and widespread poverty in the coastal areas of Sindh. It should clearly mention that the long term solutions would only come through addressing critical political and policy issues. All other investments of ADB can only compliment the poverty alleviation efforts through policy changes.
- The recommendations for long term poverty alleviation rehabilitation of coastal communities should cover
    - **environmental aspects:** release of adequate fresh water to delta and massive land reclamation efforts to restore the degraded land and water resources. Establishing a mechanism to regularly monitor the trend and pace of environmental degradation in coastal areas (e.g. sea intrusion, ground and surface water quality, land degradation, mangrove health etc).
    - **Socio-political aspects:** strictly banning the use of illegal nets, stopping illegal trawling, according priority fishing rights to coastal fishermen through abolishing contract system, ending occupation of fishing grounds from rangers etc. Suggesting royalty on oil production for Badin to provide a sustainable solution of poverty.
    - **Technical aspects:** Acknowledging that LBOD is one of the major reasons of peoples miseries in Badin. Repairing breaches of tidal link canal and diverting LBOD spinal drain away from Badin towards Rann of Kachh.
- Institutional reforms are necessary in the fisheries department. However ADB should carefully review the previous experiences and address the reasons of past failures. A comprehensive reforms strategy should be

developed, agreed with Fisheries department and other stakeholders to ensure that reforms do take place in reality.

- Undertake proper consultation with civil society forums and give due consideration to the needs expressed by local communities while designing the projects. Avoid any projects which involve risk of inviting commercial investors from outside and depriving local communities from the benefits.
- Considering the institutional weaknesses and lack of transparency in public sector organizations, adequate space should be provided for civil society representation in planning, decision making and monitoring of projects under the TA. The representation should not be a ceremonial activity, it should ensure that civil society is really involved at all stages and their concerns are taken into account before taking final steps. A strong mechanism should be ensured to make the whole process truly participatory, highly transparent. This should also have a comprehensive communication mechanism in place to ensure that information reaches to every body and every one can easily access the project implementing machinery.
- Gender and environmental checklist should be part of screening of the sub projects to ensure that the projects don't add to resource deterioration and should not miss out the vulnerable groups like women in the coastal communities.

Engr. Naseer Memon and Zubaida Birwani

Development to Destroy Nature and Displace People

(Waterfront Development on Hawksbay)

In September 2006, Federal Government announced construction of Diamond Bar Island City on two islands i.e. Bundaar and Dingi on Karachi coast. A hefty investment of $ 43 billion was promised by a UAE based real estate concern Emaar. Concerned citizens of Sindh, civil society and political organizations of Pakistan and international conservation groups termed this project a threat to natural resources of Sindh Coast and livelihood of fishing communities in the vicinity. The project sparked a new controversy on development scene of the country. However it did not stop here and the government decided to embark upon its ambitious waterfront development plan in Karachi. Nascent civil society is still struggling with decades old strong vested interest, always ready to bulldoze all norms and laws in the name of development. The latest in the line is ecologically rich Hawksbay area on the western coast of Karachi. This greed driven paradigm of development is being projected as a sign of investor confidence in the country and the government is eager to offer red carpet welcome to every foreign investor. The ultra rich dominated socio-political structure of Pakistan has been a major beneficiary of bad governance, weak civil society and absence of social justice in country, which offers fertile ground to amass more wealth with every passing moment. Waterfront development is just another money making venture of the same corridors.

1. The Project

As usual government has not yet officially disclosed the details of the project. However media has been leaking some

information on the project through news stories. Official websites of City District Government Karachi (CDGK) and the Limitless (Dubai based real estate developer involved in the project) also provide some information on the project.

According to the official website of the CDGK, the City Nazim of Karachi Syed Mustafa Kamal told journalists that master plan to construct a new city 'Karachi Waterfront Sugar Land City' at Hawkesbay has been finalized and it will be constructed on 60,000 acre with the estimated cost of US$68 billion. Responding a question, the Nazim said the President General Pervez Musharraf has approved the plan and this project will be a biggest project in the country to provide job opportunity to millions of people. He added the concerned authorities have been issued NOC for the construction of new city at Hawkesbay. The meeting was also attended by federal minister for shipping Babar Ghori, Chief Minister Sindh, chief secretary Sindh, KPT chairman, representative of Nakheel Development and Chief Executive of Dubai Islamic Bank.

The website of Limitless explains the salient features of the project as under:

"The project is a joint initiative of Limitless and the Government of Pakistan to create a new, balanced waterfront development - Karachi Waterfront, on a 25,000 hectares site west of the existing city of Karachi. The "new city" would contain a defined and carefully weighted balance of residential, commercial, recreational and entertainment facilities in state of the art, master-planned communities. The development would also be home to Special Economic Zones creating a hub for trading, manufacturing and services industry supported by world-class infrastructure and amenities. Phase-1 of the project will involve an investment of $20 billion over the next ten years for

developing more than 2000 hectares of prime water-front property. Subsequent phases of the project are expected to involve much larger investments."

A report in Daily The News, Karachi appeared on 25th May 2007, provides following details about the project.

"The first announcement of the project came on Dubai World's website on 5th June, 2006, where it stated that Limitless will develop the Karachi Waterfront project. This was followed by the news that a Memorandum of Understanding (MoU) has been signed by Pakistan's Minister of State and Privatization and Investment Umar Ahmad Ghuman and Dubai World chairman Sultan Bin Sulayman. The (MoU) was followed by a high-level meeting held in Islamabad on June 24, 2006, which was chaired by Prime Minister Shaukat Aziz. A number of important directives were given to different ministries including those of Ports and Shipping, Defence, as well as the government of Sindh. It was decided in this meeting that, since the area indicated by Dubai World is very large, the development may start in phases. According to the documents available, in the first phase Manora area, along with Sandspit and areas behind it in the Karachi Port Trust (KPT) western back waters, up to KPT's land limits with Hawksbay, would be offered to the group. In the second phase, while developing the Hawksbay Beach front, it would be ensured that a few portions are left open for the general public for recreational purposes. It was proposed in the same meeting that there should be a proper mechanism for shifting the navy and cantonment board's facilities located at Manora to the Navy land at Cape Monze area.

After the meeting, these directives were forwarded to the government of Sindh on 7th October, 2006. From here, the work gained momentum according to the dates provided in the

documents. There were reminders from the District Coordination Officer (DCO) City District Government Fazlur Rahaman to Executive District Officer (EDO) revenue, CDGK. This reminder termed the directives from the Prime Minister to be of 'high priority'.

Throughout the above work, there has never been any 'official' announcement from the federal government related to the Sugarland City project. Nor were there any reports in the media related to this mega project. However, on 22nd February, 2007, City Nazim Syed Mustafa Kamal briefed journalists about the project and also gave details of the project being finalised with an agreement being signed in March 2007. It was also said that the project has the approval from the President. This was for the first time that the project was officially announced and got coverage by the media.

This project involves an area of 60,000 acres of area with a total investment of 68 billion US dollars that has been approved by the Federal government.

According to the latest reports on the project, notices have been issued to all those hut owners coming under the project's jurisdiction. The notice states that all those huts that are in violation of the hut by-laws would have their leases cancelled with immediate effect whereas the leases of those huts that are not in violation will not be renewed as and when their term expires."

On 14th August, the national day of Pakistan, the Planning and Development department of Sindh Government invited Expression of Interests for the project. The same advertisement was placed in Daily Dawn, Karachi on 29th August 2007, this time including a note on extent of project area as 40,000 acres

centered around Hawksbay. The document however does not provide any specific details of the project.

2. Dubai, the Key Player in Waterfront Development

UAE based real estate concerns are fast expanding their overseas investments after making wonders at home. UAE is known for its surplus capital earned through high scale commercial ventures and foreign investment. Past three decades have witnessed amazing real estate development in UAE specially in Dubai which has become a hub of commercial activities. Investors from all over the world are pouring money into Dubai's business ventures. This has given tremendous boost to real estate activity.

The UAE companies have covered almost whole of their shoreline with sky scrappers and even penetrated in shallow waters to extend its coastline with towering structures. In recent years waterfront development has emerged as a major investment ground for local companies. According to a CNN report on 29th January 2005, His Highness Sheikh Mohammed announced the launch of Dubai Waterfront, the world's largest waterfront development under the direction of Sheikh Mohammed Bin Rashid Al Maktoum, the then Crown Prince of Dubai and UAE. The Dubai Waterfront is planned to cover an 81 million square metre beachfront. Destined to become an international landmark, Dubai Waterfront is the world's largest waterfront offering, and is located 35 km south west of Dubai, bordering Abu Dhabi, on the last remaining coastal waterfront of the Emirate. The Dubai Waterfront will extend Dubai's coastline by 820 kilometers, twelve times the length of its current coastline. It will consist of 440 square kilometers of water and land developments, an area seven times the size of Manhattan. It is expected to house 400,000 people. Dubai

Marina, The Palm Jumeriah, The World and Jabel Ali are the jewels in the crown of waterfront development of Dubai, whose glittering pictures mark all around the local and international newspapers, billboards and websites. Local newspapers every day carry dozens of pages with advertisement of real estate ventures and this is probably the fastest thriving business in the area.

There is no dearth of capital in UAE. A booming economy and high oil revenues helped create 9,100 new millionaires (in dollars) in the UAE only last year, taking their total to 68,100 in UAE. This was revealed in 11th Annual World Wealth Report released on 27th June 2007. Likewise Saudi millionaires grew to 89,600 in the same year.

According to the same report "globally the number of people possessing $1 million or more in investible assets rose 8.3 percent in 2006 to 9.5 million. Wealth of the world's rich increased 11.4 percent to $37.2 trillion last year. Dubai is one of the potential areas to invest this huge capital and the real estate is the most favorite funnel to pour the dollars in. Global direct real estate transaction volumes reached $ 682 billion last year. In 2006 these millionaires shifted money into real estate at times liquidating some of their assets to fund these real estate opportunities. Global direct real estate transaction volumes reached $682 billion in 2006, up by 38% from 2005".

Possessing this scale of experience and capital, Dubai's investors are now set to capture new coasts. After accumulating wealth and acquiring experience, Dubai's companies are now exploring new shores to multiply their fortune. Waterfront development is a major area of their interest and Pakistan in the immediate neighborhood seems an ideal place with long virgin shores and investment thirsty government.

According to a CNN report on 1st June 2006, Dubai World, Dubai's largest holding company is planning to invest projects worth $10 billion in Pakistan across different industries including infrastructure development, industrial and real estate projects. This includes the construction of a modern waterfront off the Karachi coastline, besides the development and management of Pakistani ports. An announcement to this effect was made in a ceremony in Islamabad in the presence of His Highness Sheikh Mohammed Bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai, and Mr. Shaukat Aziz, Prime Minister of Pakistan.

During the ceremony, two agreements were signed between UAE and Pakistan - the first aimed at developing infrastructure and building commercial and industrial real estate projects. The second agreement was targeted at building free zones and modern ports which will be managed by DP World, the region's leading port and terminal operators.

Sultan Ahmed Bin Sulayem, Executive Chairman of Dubai Ports, Customs and Free Zone Corporation and Chairman of Nakheel, signed the agreements with the Pakistani Minister of Transport and Minister of Foreign Investments.

Commenting on the agreements, Sultan Ahmed Bin Sulayem said: 'Dubai World is targeting massive investments in various sectors including real estate projects in main cities across Pakistan. Dubai World, through Limitless Company - its international real estate development arm - will lead and execute investments in residential real estate sector as Pakistan lacks residential units of high quality. Limitless will bridge the gap through its expertise in the sector. In addition, Limitless will also develop real estate, entertainment and commercial projects in different regions in Pakistan. 'Based on the extensive

expertise we have in developing waterfronts, we will work on preparing detailed studies to build waterfront in Karachi - an integrated community that will be the first-of-its-kind in the Indian subcontinent. The development will encompass world-class residential and commercial buildings, shopping centres and entertainment facilities similar to the projects that Dubai is renowned to develop.'

Dubai Port World and the Pakistani government are now working closely to finalize the details of the agreements for the company to start managing and operating Qasim Port, one of the most important and active ports in Pakistan in order to develop its operations and modernize its systems to embrace the economic and trade growth currently being witnessed in Pakistan and to make it work according to international standards that Dubai is known for.

Prior to this in May 2006 Sultan Bin Sulayem, Chairman of Dubai World, met with the President of Pakistan, General Pervez Musharraf, in Islamabad to discuss potential areas of cooperation between Dubai World and Pakistan.

The two parties agreed to jointly explore investments in various fields, including real estate developments in major urban centers across Pakistan. Nakheel, a fully-owned subsidiary of Dubai World and the developer of several of Dubai's iconic projects such as the Palms, The World and Dubai Waterfront, will spearhead efforts on this front and explore investments in the residential, commercial and leisure real estate sectors in Pakistan. Dubai World and the Government of Pakistan also discussed potential cooperation and investment in other commercial activities including development and management of industrial infrastructure, including industrial parks and free zones, and development and operation of public sector

infrastructure projects, including oil & gas related projects, airports and port and terminal management.

Speaking on the occasion, Sultan Bin Sulayem said "Pakistan is one of the world's fastest growing economies making it an attractive market for Dubai World. We have a close relationship with Pakistan and would like to further strengthen it by capitalizing on opportunities in the country. The Middle East has a huge potential investor base for investments into Pakistan.

President General Pervez Musharraf welcomed Sultan Bin Sulayem to Pakistan and promised to provide the full support of the Government to facilitate Dubai World's investments in the country. He was quoted as saying "We are delighted to welcome Dubai World to Pakistan and are very excited about the prospect of Dubai World undertaking major projects in the country.

This is how Dubai based companies have been making their entry in Pakistan in a big way during the recent years. Dubai World, Nakheel, Limitless and Dubai Islamic Bank are actively involved in furthering UAE's investment interests in Pakistan. These names have started appearing Pakistani media over recent years. A brief profile of each would give an idea of their future role in the country.

2.1 Dubai World

Official website of Dubai World defines it in these words. "Dubai World was launched as one of the world's largest holding companies under the decree ratified on 2nd March 2006 by Sheikh Mohammed Bin Rashid Al Maktoum, Ruler of Dubai, UAE Vice President and Prime Minister. It was launched as world's leading holding companies, with over 45,000 employees in over 75 cities around the world.

Comprised of development, investment, marine services, commodities and ports and free zone divisions, Dubai World is a powerful growth engine with an unprecedented collection of companies including: DP World, P&O, Jafza, Dubai Drydocks, Maritime City, Dubai Multi Commodities Centre, Kerzner, One & Only, Atlantis, Island Global Yachting, Limitless, Nakheel, Istithmar, Inchcape Shipping Services, Tejari, Technopark and Tamweel".

Led by Sultan Ahmed Bin Sulayem, Dubai World was established to continue expanding Dubai's aggressive growth, domestically and abroad. It owns some iconic projects in Dubai like The Palm, extensive real estate investment in New York and London, unique hospitality destinations in every corner of the world, and a growing global port footprint from China to Peru.

2.2 Nakheel

Nakheel is a UAE government owned corporation, founded in 1990. With its head quarter in Dubai, it now serves in 87 countries. In 2006 it generated revenue of 70 billion dollars and earned a net income of 15.8 billion dollars. It has 2000 employees on board.

Nakheel is a real estate developer in Dubai and creator of several land reclamation projects, including the Palm Islands, the Dubai Waterfront, and The World. Its residential projects include Jebel Ali Gardens, International City, Jumeirah Islands and Jumeirah Lake Towers. Its shopping projects include the Dragon Mart (At International City) and Ibn Battuta Mall. Its main competitor in residential development in Dubai is Emaar Properties.

Nakheel's flagship properties are the three man-made palm tree shaped islands on the coast of Dubai. Nakheel operates under the umbrella of Dubai World, which manages various businesses on behalf of the Dubai government.

2.3 Limitless

Limitless, an off shoot of Nakheel was established in July 2005, with the key objective of diversifying and globalizing Dubai's portfolio by leveraging the know-how and exposure gained by Dubai World's real estate initiatives. Limitless LLC, a Dubai World Company, is an integrated global real estate developer. It lays claim to three specific areas of expertise that provide the company with a competitive advantage – master planning large urban communities, waterfront development and the implementation of large-scale balanced projects.

2.4 Dubai Islamic Bank

Dubai Islamic Bank (DIB) was established in 1975. In the first half of 2007 its net profit rose to 1.5 billion UAE dirham (approx 24 billion rupees), an increase of 113 per cent compared to the corresponding period in 2006. Recently, DIB was ranked among the fastest-moving banks in the world for the second consecutive year in the annual Top 1,000 World Bank list published by 'The Banker' magazine.

In Pakistan it started its business in March 2005. A Dubai Islamic Bank (DIB) delegation led by Dr. Mohamed Khalfan bin Khirbash, UAE Minister of State for Finance and Industry and Chairman of DIB, announced the establishment of DIB Pakistan Limited, a wholly owned subsidiary of DIB, at a ceremony hosted by Pakistan Prime Minist· Shaukat Aziz in Islamabad.

3. The Project Area

According to the "Request for Proposal" (RFP) document issued by the Planning and Development Department along with inviting Expression of Interest, the project area is located around Hawksbay at western coastline of Karachi. In section-IV of the document, the geographical coverage has been vaguely described as "The Karachi Waterfront Development project comprises a large tract of land to be developed at western coastline of Karachi centered around Hawks Bay, Karachi Pakistan with an estimated available or to be made available land and measuring approximately 40,000 acres". This does not suggest any specific location of the project.

This vagueness is also evident from the introductory note given in the beginning of the document. It reads "The approximate total land within the proposed area will be a minimum of 40,000 acres (19047.53 acres available Government of Sindh land, 21037.15 acres of land on short lease subject to cancellation) all of which is not contiguous. There are pockets of land in the proposed Development Area that are not owned by any government entity or agency, and the selected developer will be expected to work with the government entities and agencies and with the actual owners of the land to acquire or find other viable mutually-beneficial and mutual agreeable solutions for these pockets of land." This clearly indicates that the project will be spread all around the Hawks Bay area and not restricted to any particular part of the area.

3. Threat to Eco-system

Hawksbay homes the ecologically rich sandy beach Sandspit.. About five kilo meters long this sandy strip hosts unique eco-system of endangered green turtle. This is a major breeding

point of the green turtle. Sindh Wildlife Department and World Wide Fund for Nature (WWF) has been working on conservation of green turtles since many years.

Marine turtles have been included in the WWF - Pakistan strategic plan known as 'Species of Special Concern'. Globally, there are eight species of marine turtles and they are all have been classified as endangered. Green Turtle (Chelonia mydas) and Olive Ridley Turtle (Lepidochelys olivacea) are the two species of marine turtles that nest along the Sandspit and Hawkesbay beaches at the Karachi coast. All species of marine turtles are listed in the Convention on International Trade in Endangered Species (CITES). Pakistan is a signatory to CITES, which prohibits trade of turtles, turtle parts and eggs. The Government of Sindh has also declared Marine Turtles as 'Protected' species. Mega construction schemes may not only disturb this fragile eco-system but may also completely devoid this area from green turtles if proper environmental management is not carried out.

In the backwaters, mangroves ecosystem provides resting place to a variety of migratory birds. Noisy construction work and enhanced vehicular movement will cause deterrence to migratory birds and they may abandon this area. The area owned by KPT has mangroves and vegetation cover spread over 400-500 hectares (over 1000 acres). The mangrove eco-system has multiple benefits including resting place for migratory birds and nursery for shrimp and several fish species. Local fishing communities also use these forests for fodder and fuel. Mangrove eco-system in Indus Delta is poorly managed and severely threatened. Projects like Diamond Bar and Sugar Land City can cause severe damage to this eco-system. In past KPT projects like Mai Kulachi road and other infrastructural work along the shore has caused severe damage to mangroves.

As appears from the RFP document, Waterfront development is not a single project but it is an amalgamation of several fragmented projects. It is worth mentioning here that the Karachi coast homes an integrated fragile and complex eco-system involving vanishing mangroves, dwindling fish species and fast disappearing migratory birds. Any development schemes of such scale would have potential negative impact on its eco-system. Also these developments will have far reaching impacts on livelihood of coastal communities. These communities earn their livelihood through beach related leisure activities and subsistence fishing. The waterfront development is bound to bring drastic changes in their centuries old lifestyle. The project proponents are only making hollow claims of compensating and benefiting the local communities without giving any substantial details. Such type of development can have multifarious social environmental impacts.

The RFP document makes it obligatory to conduct Environmental Impact Assessment (EIA) of the project. However it may be noted that the whole development package on Karachi Coast will have cumulative impact on coastal eco-systems. Therefore project based EIAs may not depict true picture of environmental and social impacts. It requires Strategic Impact Assessment (both social and environmental) to take holistic picture of likely impacts on natural resources and local communities. Although the Environmental Protection Act of 1997 calls for EIA of such projects but it is not in sight so far. Environmental regulation in the country and in Sindh particularly, is very weak. Environmental Protection Agency in Sindh is in shambles. A news story carried by daily Dawn (25th Sept 07) reveals the lack of qualified and trained people in Sindh EPA. Political intervention has reduced this organization to an in-effective entity. Knowing the capacity and credibility of environmental regulators in country, one can easily guess the

degree of ease with which environmental rituals can be fulfilled by the mighty money masters.

5. Community Perspective

Hawksbay is home to most under developed centuries old villages of fishing communities. Predominantly Sindhi and Balochi speaking communities are living in this area even before the British Raj. Manoro was the original Karachi, where a fort wall defined the boundary of Karachi at the time of British occupation in 1843.

Even after six decades of independence, these villages are deprived of very basic facilities. Infrastructure and other social sector services like drinking water, health and education are in its worst shape. Presently there are two union councils on the Hawks bay, namely Gabo Pat and Baba Island. The Gabo Pat Union Council has more than 100 goths, some of them more than a century old. Total population in this union council is over one hundred thousand people. Some of the villages have sizable population like Abdul Rehman goth (8,000) and Faqeer Mohammad goth (3000). There are 9 Dehs in the union council. Only two dehs (Lal Bakhar and Gound Pas) have water supply system, that too not reliable. Remaining seven dehs have no any drinking water facility provided by the city government. They occasionally receive water tankers. Out of 8 Basic Health Units only one is properly functioning, another is partially functional and all others do not function. Local communities have very limited transport facilities to reach the heart of city. Only two buses ply every day to commute people to Lea Market.

Baba Island Union Council comprises of three big islands namely Baba Island (16,000 population), Bhit Island (12,000 population) and Shams Pir Island (3,000 population). There are some large

villages like Younisabad (3,500 population) and Kaka Pir (1,000 people). Centuries old Islands and villages in this union council are also deprived of basic human needs such as drinking water. It is strange that the government never concentrated to develop these old heirs of Karachi and kept them in centuries old state of life. Local communities of Hawksbay area have not been consulted on the project and no information has been shared with them. The centuries old villages are now feared to be dislodged.

Hawksbay is among the most beautiful resort places in the country. Thousands of visitors frequent beautiful locations such as Cap Mounz, French Beach and Paradise Point on the Hawksbay. Once the city of rich is erected, no common man would have easy access to these charming views of nature. This will also deprive hundreds of daily wage earners at these picnic points. A number of huts constructed in the area would also be demolished. These huts are owned by some individuals and private companies. Local people are hired as caretakers on these huts. If these huts are removed and people stopped visiting picnic points, several hundred local villagers will loose their livelihood resources.

Local communities have genuine concerns that they would be dislodged from their ancestral abodes to pave the way for constructing the modern city. According to a report of Urban Resource Centre, Karachi more than 23,575 houses (excluding houses and shops demolished in the Lyari riverbed due to the Lyari Expressway Project) have been bulldozed by various government agencies since 1992. As a result of these evictions 185,801 people have been displaced. During the period of Jan – May 2006, the government bulldozed over 3,490 houses in the various parts of the city. A total of 23,124 people were made homeless as result of these evictions. In recently implemented

mega projects of Layari Expressway about 25,000 families have been displaced. Majority of them is suffering on many accounts such as compensation, resettlement, loss of employment and breakage of social relations.

As appears from the official documents, the project requires 40,000 acres of land the government has only 19047.53 acres available, that too is not contiguous. This indicates that over 21,000 acres of land would need to be managed in different parts and this may result in non-volunteer displacement of poor communities. The project document has indicated towards this in sugar coated language "There are pockets of land in the proposed Development Area that are not owned by any government entity or agency, and the selected developer will be expected to work with the government entities and agencies and with the actual owners of the land to acquire or find other viable mutually-beneficial and mutual agreeable solutions for these pockets of land".

Such fears become more acute in absence of any sharing/consultation with local communities. It has become almost a norm in the country to keep information about all big projects confidential from citizens particularly the potential affectees. In this case also all plans are being made behind the close doors and local communities are still unaware of the project and its likely impacts. No consultation with civil society or local communities has been conducted and every thing is shrouded in mystery. This attitude towards development creates genuine concerns among the citizens about these initiatives.

6. History of Development on Karachi Coast

Historical facts reveal that he modern Karachi has been developed at the cost of livelihood of fishing communities. The

process started before partition and gained momentum after partition. With rapid influx of population from India, whole landscape of the city went through drastic changes. Major development initiatives along the coats such as Port Qasim, Fish Harbors, Steel Mill and various phases of Defence Housing Society, all took the toll of natural resources of coastal communities. The proponents of these projects promised employment and other benefits to affected communities but ended up with only marginalizing coastal villages. Coastal communities have bitter experience of development activities.

A recently published book "Karachi Sindh Jee Marui", authored by Mr. Gul Hassan Kalmati narrates the plight of coastal communities in the wake of major development projects. According to the author, in 1974, Pakistan Steel Mill was founded. 18,660 acres of land were acquired from 500 land owners and 200 lease holders. About 15 villages were swollen by the mill, namely,Syed Mahmood Shah, Ahmed Gabol, Thaenr Gabol, Haji Amir Ali, Saatal Jokhio, Achar Jokhio, Shaikh Jokhio, Dur Mohammad Jokhio, Soomar Kalmati, Alu Khaskheli, Soofan Gabol, Haji Natho Kalmati, Haji Meenhan Wasayo and Khanto goth. These villages were rich in pastures, livestock and fisheries. Affectees were offered one rupee per squire yard for owned land, 1500 rupees for a pacca house and 600-1000 rupees for katcha house. Affectees approached the court, which decreed in their favor and new rates were announced but villagers were never paid the same. Till 1974 some 25,000 regular and more than 4000 temporary staff was employed in the Mill. Displaced villagers were only 35 among them and now reduced to 16 only. Ministry of Production also issued a letter number PD/JSA/3076/79 on 16th May 1979 promising employment for local villagers but it never happened. A number of industrial units are operating in the area, having more than 30,000 employees but hardly two dozen local villagers are among them.

Port Qasim Authority is another empire built on the bulldozed remains of coastal villages. The Prot was inaugurated in 1975. At that time 20,000 acres land was acquired on coast and another 15,000 acres were acquired from Sindh government. The port erased 35 villages namely Mohammad Suleman, Haji Umeed Ali, Thoohar Panhwar, Jatan Jo Goth, All Bakhsh, Abdul Rehman, Misri Mohammad, Qasim, Mola Bakhsh Baloch, Abul Latif, Haji Mohammad Hassan, Khan Mohammad, Ashraf, Saanwan, Noor Mohammad, Shoukat Ali, Rahim Dino, Abdul Razaq, Nabi Bakhsh, Mehaar, Mevo, Ali Akber, Nawab Baloch, Karam Ali, Dinu, Mohammad Rahim, Aahmed Khan, Karam Khan, Ali Khan, Moorand Kalmati, Umed Ali Gabol, Mohammad Khan, Wasan Khan, Ghulam Mohammad and Allah Bachayo. Board of Revenue and the Port Qasim Authority signed an agreement on 11th May 1981 promising that all affectees will receive compensation and will be resettled before displacing them. However only one village received some compensation and the remaining 34 never received any benefit. From 1974 to 1990, the Port Authority employed 2200 persons; only 79 were from the affected villages. Port Qasim Authority ignored almost every agreement and instructions from Sindh government on local employment. The authority acquired villages for port activities but now the same land is being allotted to private concerns for commercial purposes. Hundreds of production units are operating on the same land but villagers never received any benefit of this development on their land. Now Port Qasim Authority is bent upon selling two islands Dingi and Bundaar to deprive fishing communities from their remaining sources of livelihood.

These are only the glimpses from the long story of injustice meted out to coastal communities ever since the country appeared on globe. Being marginalized and politically weak the peaceful villagers of coast have always been made the victim of development. This history of ruthless development has created

a sense of insecurity among the coastal communities ever since they have heard the drumbeat of new development.

7. Development Ethics

The concept of Triple Bottom Line is a corner stone of sustainable development. Any development initiative which prefers only one "P" i.e. "profit" and ignore the other two i.e. "People" and "Planet" does not qualify the fundamentals of sustainable development. Sadly the waterfront development has all its focus on profits and there is no care for its impacts on people and nature. The concept of development ethics explains the reason for creating aforementioned balance. David Crocker of University of Maryland at College Park in his paper "International Development Ethics" explains this concept succinctly. "'Development' can be used both descriptively and normatively. In the descriptive sense, 'development' is usually identified as the processes of economic growth, industrialization, and modernization that result in a society's achieving a high (per capita) gross domestic product. So conceived, a 'developed' society may be either celebrated or criticized. In the normative sense, a developed society, ranging from villages to national and regional societies, is one whose established institutions realize or approximate (what the proponent believes to be) worthwhile goals—most centrally, the overcoming of economic and social deprivation".

Regrettably most of the development projects in our country negate these basic definitions of modern concepts of development. The country carries the baggage of a terrible history of mega projects. Displacement of local communities, lack of appropriate resettlement and compensation plans coupled with massive corruption in compensation process, damage to eco-system and worsening social inequalities are only few of the

many negative impacts of mega projects experienced in the country. Tarbela Dam, Chotiari Dam and Left Bank Outfall Drain Project are only few examples to quote. Socio-political structure of society and poor governance has always benefited the rich in this country at the cost of poor. Every mega project benefits the privileged echelon and deprives the already deprived segments of society. Hence development initiatives of this scale always widens the gape between haves and have nots in the country thus results in increased social strain.

Citizens of Karachi enjoy very few recreational opportunities. Therefore developing coast for public recreation is not a bad idea as long as it provides equal opportunities of healthy recreation to every citizen. However waterfront development is not meant for ordinary citizen, it is only meant for elite who can afford access to expensive recreation.

Had development been the objective, government would have first invested to improve lives of people living in coastal village. These villages give a primitive look and by no means they look like a part of Karachi Metropolitan. During past sixty years, this country could not give them basic human facilities. Even the leading Urban NGOs working on poverty alleviation always preferred working in katchi abadies and very few worked for social uplift of communities in these villages.

Karachi city itself is a home to numerous problems and a large population lives life full of sufferings and miseries. Their development should be the first priority rather than investing billions to create dream islands for elite. The following facts about state of development in Karachi explain the reason for the need to revisit development priorities.

- Citizens do not receive adequate drinking water from pipelines and they pay 1.8 billion rupees to private tankers every year. (Dawn-24th June 07)
- 45% of drinking water is wasted due to poor infrastructure (Dawn-14th Feb 07)
- Karachi produces 9000 tons of garbage daily. Two third of which does not reach any ultimate disposal. (Dawn-22nd Nov 06)
- Karachi has only one snorkel of over 100 ft length to fight fire in high rises, which also remains out of order (Dawn-7th Jan 07).
- Karachi Fire Department had 74 tenders in 1995 and today it has only 20 tenders (Dawn-31st Aug 2007)
- 5,000 manholes are without cover in the city, posing threat to lives (Dawn-20th Sept 07)
- A low intensity rainfall inundates majority roads and streets of Karachi
- Karachi has been placed at 175th number out of 215 leading cities on quality of life index. In 2006 it was slightly better at 170th number. Delhi, Mumbai and Dhaka fared better than Karachi on this scale. (Dawn-2nd July 07)
- 29,400 mobile phones were snatched in Karachi during the first eight months of 2006 (Dawn, 16th Sept 06)
- During first none months of 2006, total 8,800 cars and motor bikes were snatched/stolen in Karachi (Dawn-14th Oct 06)
- Karachi generates about 400 raw sewage every day out of which only 85 MGD is treated and over 300 million gallons of untreated sewage from Karachi is released to marine eco system on daily basis (25th April 07)
- Pollution at Karachi Harbor causes an annual loss of 1 billion dollars to Pakistan Navy.
- Air and water pollution have crossed national and international quality standards (Dawn-20th July 2006)

This list of grim facts can go virtually endless. While citizens are not getting even very basic human facilities, there is hardly any justification of investing huge amounts in luxurious projects. One can easily guess the intentions behind these projects, which are only meant to create islands of prosperity in the ocean of deprivation and dejection.

Social development indicators particularly of health, education, drinking water and sewerage are pathetically poor in the country. In many social sector areas we lag behind SAARC countries and in some others even stand below the poor countries of Africa. Taking just an example of housing, the country needs 6.2 million new housing units to provide shelter to every citizen. Urban areas of Sindh require 135,000 new housing units to meet the present need and 200,000 units each year over a decade to clear the housing backlog. Rather than investing in housing for low income shelter less citizens, huge sum of money is being committed for ultra rich elite through such projects in the name of development. Has there been any genuine commitment with the development of people, huge investment would have been made to improve state of human development in rural and urban areas of Pakistan.

8. Future Scenario

Human greed has damaged the nature to alarming proportions. The degree of tempering with nature's balances has surpassed all limits and now it is the turn of nature to take its toll. Recent changes in climatic patterns have proved that development along the coast would be the most vulnerable.

It would be pertinent to quote here a report Human tide: the real migration crisis issued in May 2007 "Over a billion people, one in seven on earth could be forced from their homes between now

and 2050 if the climate change worsens. Conflicts, large scale development projects and widespread environmental deterioration will combine to make life unsupportable for hundreds of millions of people mostly in Sahara belt, South Asia and the Middle East. Forced migration is now the most urgent threat facing poor people in the developing world. Over 155 million people are already displaced by conflicts, disasters and large scale projects"

Climate change has started manifesting in various shapes. Rising sea level, tsunamis and cyclones would make the problem acute if natural shields like mangroves are removed to create artificial islands and coastlines. Infrastructure and public services in Karachi can ill afford any natural calamity like cyclone. Over past two years moderate rains have brought disastrous impacts on city life. In May 1999 cyclone A 02 and in June 2007 cyclone Yemyin just passed by Karachi. These cyclones brought severe damage to life and property in Gujrat (India) and Balochistan. A fraction of that disaster would have played havoc with Karachi. Development along the coast needs to be carefully weighed against the possible climatic horrors. No matter how advanced technology is employed, development would still remain vulnerable to natural catastrophes. Preservation of natural eco system offers the most reliable shield against natural disasters. Karachi coast is being fast denuded from its precious mangroves cover, exposing the city to nature's wrath. Such madness in the name of development would pave the way for future disasters, impact of which would be beyond our imagination.

References

- Kalmati Gul Hassan, *Karachi Sindh Jee Marui*, Kaachho Publication-Karachi, 2007

- Arif Hasan, *Understanding Karachi, Planning and Reform for the Future*, City Press-Karachi, 2002
- Arif Hasan, *The Scale and Causes of Urban Change in Pakistan*, Ushba Publishing Int. -Karachi,2006
- Human tide: the real migration crisis, A Christian Aid Report, May 2007
- David Crocker, *International Development Ethics*, University of Maryland at College Park
- Sidra Rafique,The News-Karachi, 25th May 2007
- Shahid Husian, The News-Karachi, 26th May 2007
- Planning and Development Department, Government of Sindh, *Request for Proposal, Development of Waterfront at Western Coastline of Karachi*, 2007

Naseer Memon and Zubaida Birwani

Is there Enough Water for Kalabagh Dam?

Successive governments have been embarking upon the campaign for developing consensus on a much controversial issue of Kalabagh Dam. The proponents of the dam have been throwing their weight on almost every government for implementation on the project. But owing to enormous pressure from the anti-dam public ranks, the project could not be kicked-off as yet. The chief Executive General Pervaiz Musharaf unveiled his plan for construction of Kalabagh dam in

a meeting with editors of Sindhi newspapers in Karachi. Like past governments, the General called for an urgent need of compensation of fast depleting reservoirs. He made it a point that the country is at risk of food security if no new dams were built. The only novelty observed this time was an elusive package of incentives offered to the people of Sindh. The package includes construction of long over due "Rainee Canal" and "Sehwan Barrage". These two projects are held in pending since many years, for reasons better known to policy wizards of the country.

It is very simple to understand that a dam needs essentially surplus water, to be stored in. Without having adequate surplus flows, no one can think of dam structure. Proponents of Kalabagh dam have been repeatedly mentioning excess water, draining downstream of Kotri Barrage to Arabian Sea. Based on this major misunderstanding/misinterpretation some often-repeated myths have been associated with Kalabagh dam.

- Enough water is available for a new dam
- 35 maf water is flowing 'waste' in to Arabian Sea every year
- Kalabagh dam project needs only 6 maf water
- Water flowing below Kotri is mere wastage

It would be pertinent to examine them on scientific basis.

1. Enough water is available for a new dam.

One needs to be very cautious, while talking about the availability of water for storage. It is worthwhile to carefully analyze the history of flows in Indus. Misleading interpretation of data may create confusion. Water available for a dam is never based on average flows. In order to accommodate the scarcity of lean

years, available water for 80% of the past years is regarded as actually available water for damming purpose. It is often said in case of Kalabagh dam that at an average 37.27 maf water is annually available in the Indus River system. Which is an average of available water from 1922-23 to 1990-91. Whereas the available water for 80% of the time is only 123.59 maf. It may be mentioned that water accord of 1991 is based on a total annual quantum of 114.35 maf.

Now if the picture for an ordinary year (based on the available water for 80% of the time) is drawn, it would be as under;

Availability of water in Indus river system	123.59 maf
Apportioned to four provinces	114.35 maf
Release below Kotri Barrage	10.00 maf
Net	**-0.76 maf**

If 15% of riverbed losses were also added the net available water would run in total deficit of 15.95 maf.

It is worth understanding that design of irrigation channels/barrages/dams is never carried out for exceptional cases. It is the worst scenario, which is always considered. In this case the system lacks in capacity for even an ordinary year. Worst is the scenario being presently witnessed, when reservoir storage is preferred over agricultural and human needs. One can draw fair projections for future with more dams on Indus.

2. 35-maf water is flowing waste in to Arabian Sea every year

A lot has been written on the quantum of water released below Kotri barrage into the Arabian Sea. Some of the experts are of

the opinion that 35 maf of water is being wasted to the sea every year, which could be stored in a reservoir. This has also been made a strong justification for the building of the Kalabagh dam.

The Indus system flow data of 11 post-Tarbela years (1976-77 to 1986-87) shows that the average release below Kotri remained 34.83 maf, which is depicted as 'waste'. A simple arithmetic calculation negates the claim.

A. From the above figure if 10 maf apportioned for release below Kotri under water accord is deducted, it becomes 24.83 maf.

B. Under the accord all canals of the country are allocated 114.35 maf, whereas the present withdrawal is 105 maf. The remaining 9.35 maf are meant for future needs of the provinces. This quantity shall not be treated as available 'waste' in the coming years. Hence the quantity is of water flowing to sea is further reduced to 15.48 maf.

C. Three eastern rivers of the Indus system viz Sutlej, Ravi and Beas are sold to India. Yet they still contribute about 2.23-maf water to the Indus River System. India will soon divert this water for its newly constructed Bakhra dam on the Sutlej, and two other dams on the Beas and Ravi. Commissioning of these dams will definitely make this water unavailable to the Indus River system. Deducting the same; flow to the sea is reduced to only 8.51 maf.

D. Under the Indus water treaty of 1960, India was not only apportioned waters of the three eastern rivers but it was also given the right to cultivate 1,343,477 acres from the waters of the western rivers. Presently India is cultivating 755,799 acres by using 6.75 maf. Cultivation on the

remaining 557,678 acres would proportionally require 4.79 maf.

This quantum of water shall also be excluded from the remaining 8.51 maf. The so-called waste further declines to only 3.27 maf.

The most important aspect of the problem is that the calculated waste of 34.83 maf is based on the mean annual discharges, and not on the water availability for 80 per cent (four out of five years) time, which is the criterion for calculating the water availability for damming purposes. Under this formula the available quantity is 10 to 14 maf less than the mean flow. For example the flow below Kotri barrage during last year was even less than the minimum agreed 10 maf and not a single cusec has been released below Kotri since first week of October 1999. Hence the availability of 35 maf is also questionable for planning purposes.

3. Kalabagh dam project needs only 6 maf water

An impression is prevalent that the Kalabagh dam requires only 6 maf water, which is hardly one sixth of the 'waste' towards Arabian Sea. It is a seriously misleading figure. The dam project actually requires 18.88-maf water and not 6 maf as mentioned normally. It is not an ordinary carry over dam (to store surplus during high flood and release during low flows), but it also has two off-taking canals to draw 12.78-maf water annually.

While replying to a question of Senator Khurshed Ahmed during a senate session in 1985, it was told that;

"A 170 mile long canal with 15,000 cusecs discharge, off taking from the left bank of Kalabagh dam will provide irrigation to a gross area of about 370,775 acres on the both banks in

Mianwali, Khushab and Jehlum districts of Punjab. It will also meet water shortages in Mangla command area before discharging into the Jehlum River upstream of Rasul Barrage." This canal will lift 6.66 maf from Kalabagh dam. Another canal would be drawn from the right bank, with a capacity of 15,000 cusecs to irrigate 2.12 million acres in D.I Khan. It will lift another 6.2 maf water.

This information is surprisingly concealed in some Wapda documents on Kalabagh dam. But it is no more secrete now that the dam is primarily meant for cultivating more land in Punjab province, which accounts twice as higher than that of the storage requirements.

During his meeting with editors of Sindhi newspapers the Chief Executive also announced the construction of Sehwan Barrage and Rainee canal in Sindh (subject to construction of the dam). The Sehwan Barrage which in its original design had 4 channels (Feeder A, feeder B, Sakrand Branch and Manchar Link) is now said to will have six canals. The ultimate net water requirements of the Sehwan command is 17.35 maf (page 1-99 of Sehwan Barrage Complex Project Planning Report, Main Report: MMP and HTSL, 1969) Though Gen. Musharaf did not revealed the new water requirements after two additional canals on the barrage but at least it is 17.35 maf, if only original plan is considered. Rainee canal will require 1.33 maf water. (page 6-31, 6-32 Pre-Feasibility Studies of Rainee Canal Project, NESPAK: 1984).

Hence new development plan (KB dam, Sehwan Barrage and Rainee Canal) would at least require 37.56 maf water perennially on regular basis. Even if all the so-called 'wastage' of Arabian sea is diverted, it would not be enough to meet the requirement.

4. Water flowing below Kotri is wastage

In the highly controversial water accord of 1991, it was provisionally agreed to release at least 10 maf below the Kotri barrage to maintain the deltaic and coastal ecology. It was the understanding that the exact required water quantity would be determined through scientific studies and would be revised accordingly.

It may be recalled that below Kotri, Indus travels for about 280 kms. The districts of Hyderabad, Badin and Thatta are at the Kotri downstream. Several thousands of people have their survival on the Indus below Kotri. Not only is the Kotri barrage there, but the Arabian Sea is there also. These areas contain human population along with their agriculture, forests and aquaculture. Thatta district where Indus intermingles with Arabian Sea, alone has a population of over 1.1 million human beings; 250 thousand cattle heads and a forest spread over 4.25 lac hectares. All these need certain quantum of water.

The other major aspect is of seawater intrusion. In natural state the fresh water inflow from river is required to abate the tidal impact of sea. Twice a day tide and twice a month springtide cause considerable damage to the land and fresh water aquifers in the areas closer to the coast. The springtides particularly result in hazardous accumulation of chlorides in the soil and render it unarable. Also with regular tidal impact, soil erosion is caused which results in increased tidal vector. Ultimately these areas become a part of the sea. People of Shah Bunder, Keti Bunder, Kharo Chaan, Garho town, Jati and Ghora Bari complain that the sea boundaries have been extended over the last few decades. In summer seawater intrusion is experienced even up to Thatta, 75 kilometers upstream of the sea.

Indus delta originally occupied an area of about 600,000 hectares, consisting of creeks, mudflats and forests between Karachi in the north and the Rann of Kutch in the south. There are 16 major creeks making up the original delta, but due to reduced flows below Kotri, only the area between Hajamro and Kharak creeks now receives water from the Indus, with one main outlet to the sea, Khobar Creek. The active delta is now only 10 per cent of its original area. The land with blank blanket in delta area such as Kharo Chaan, Keti Bunder, Jati and Garho was previously very much fertile. Sea tides have played havoc with these parts of Thatta and Badin districts. But no agency is there to monitor this impact. There is no official record showing the number of villages and their population, which is forced to surrender their villages to sea tides and has migrated to some other place. Loss of land, agriculture, forest and cattle heads is also unknown. Without cognizing these dimensions, it is very difficult to declare Kotri downstream flow as 'waste'.

In 1992, the World Bank, on the request of the Pakistan Government had agreed to conduct a study to establish the minimal water required at Kotri downstream. The United Nation's Development Program (UNDP) also agreed to provide $800,000 for 86 staff months of consultants. The World Bank also determined the terms of reference (TOR) for the study. The TORs encompassed almost all important aspects inter alia economic and environmental assessment of the issue. Even technical proposals were invited from consultants through a letter dated Sept 14, 1992. Surprisingly the member from Punjab in the IRSA opposed the study and hence it was given up. There seems no rational behind the move, since there was no financial liability on the government. The study was of immense importance, which would have paved the way for once and forever solution of the controversy.

Deltaic and coastal ecology is a major factor, which is always underestimated and is labeled as drum beating by the so-called environmentalists and anti-dam lobbies. In fact, the matter is of great importance. It does not need a great deal of engineering to understand the environmental and economical importance of mangroves, forests and various fish species, which need certain minimum fresh water flow in the estuaries.

Mangrove forests in the Indus delta is spread over 650,000 acres and once was the sixth largest of its kind in the world. According to the document containing TORs of the aforementioned proposed study, the forest provides fuel wood to approximately 120,000 people, forage to 16,000 camels and other products to 28,570 households. The forest owes its sustenance to nutrient- loaded silt in the estuaries. Mangroves also act like a shield against active tidal erosion in the area. This forest supports thousands of botanical, aquatic and wildlife species. It is a nursery particularly for most of the 44 types of commercial species in the deltaic area. All these benefits are dependent on the survival of the forest, which in turn needs fresh water flow in the estuaries. There has been a significant reduction in mangroves cover from around 263,000 in 1978 to around 158,500 hectares (about 40 per cent) in 1990.

Mangrove ecosystems are considered as very important for many of the commercially caught fish species along the Pakistan coast. The total fish production of the Sindh coast is estimated at 350,000 tones. In 1988 landings from the creeks were estimated at about 96,410 tones. Migratory fish, such as Palla and Barramundi, have registered a significant decline. Catches of Palla were reduced from about 10,000 tones per annum during the 1970s to 400-600 tones per annum in the late 1990s. Now this specie is becoming rare in the market. Similarly, the catch of Barramundi has declined from 1000-3000 tones per

year in the 1980s to about 200 tones per annum in the 1990s. This situation clearly indicates the negative impacts of upstream diversion. The following table gives the chronological account of reduced flows towards the sea.

1940-54	73.8	10.9	**84.7**	-	Sukkur Barrage (1932)	225.0
1955-65	69.7	10.2	**79.9**	**5.66**	Barrages: *Kalabagh (Jinnah) 1955 *Kotri 1955 *Marala 1956 *Taunsa 1958 *Guddu 1962 *Warsak dam 1965	
1966-76	44.4	1.6	**46.0**	**45.7**	*Mangla dam 1967 *Chashma barrage 1971 *Tarbela dam 1976	
1977-92	33.1	2.1	**35.2**	**58.4**		100.00
1992 onwards	-		**10.0**	**88.19**		30.00

The major justification put forward for having a large dam in the country is to meet the food and fiber requirement of the swelling population. So far as the apprehension of food security is concerned, there is no dichotomy of opinions that it should be given a serious thought. But it is not only the water, which needs to be taken care of. There are several other measures, which could also be taken to meet the needs.

Large dams are nowadays globally rejected structures and there is a wide spread consensus that big dams cause severe irreparable damage to the nature. Disasters both ecological and human are reported from all around the world. Emphasis is now being shifted to water conservation rather than storage. For several technical and political reason the Kalabagh dam project has become much controversial and any attempt of creating elusive consensus would be merely wastage of time and will result in creating more hatred among the people of the country. It would be appropriate to suggest that the debate should be focused on technically feasible and politically acceptable alternatives of Kalabagh dam, such as reducing colossal seepage losses of around 50 maf, improving farm management practices for optimum use of water, changing cropping pattern from high to low delta crops, efficient operation and management of irrigation net work, reusing saline effluent, containing population growth to cap food & fiber demand and fair distribution and better management of available water.

Daily Dawn, August 07, 2000

Poor Action Plan to Respond LBOD Failure

Left Bank Outfall Drain (LBOD) episode has once again proved that technologies and modern sciences would always remain incomplete without appreciating traditional wisdom. The recent study report of the Inspection Panel of The World Bank has confirmed what illiterate fishermen and poor coastal communities have been predicting about the fate of the project since years. In fact they predicted LBOD's failure at the time when experts were day night busy in making tall claims of their engineering splendor.

Generally in Pakistan and specially in Sindh the magnitude of water logging and salinity has surpassed alarming limits and the systems needs thorough revamp, a part of which is drainage in addition to several other desirable steps. Extensive Irrigation network with 3 barrages, 14 canals, more than 1,400 minors/distributaries and over 40,000 field channels certainly requires matching drainage facilities and modern water conservation techniques to maintain its productivity. Situation has been worst particularly on the left bank of Indus, which receives bulk of river flows and supports larger part of canal command area. Due to various reasons, left bank areas started developing water logging and salinity soon after the commissioning of barrages. LBOD project commenced in the end of 1984 with an objective of reclaiming agricultural land in three districts on the left bank of Indus viz. Nawabshah, Sanghar and Mirpur Khas. Since the project was planned and designed as an engineering project therefore it failed to capture broader canvas of social and environmental dimensions. As the project proceeded, it unfolded various counter-productive outcomes. Apart from usual snags and inefficiencies which are commonly

found in projects of such magnitude, it ignited more serious questions of development approach. The below mentioned facts give few glimpses of violations of standard development practices.

- The project was benefiting people in one area at the cost of other end. The three beneficiary districts had to transport their effluent through Badeen, which had no direct benefit from the project; it rather paid the cost of all benefits going to upper end. This negated a fundamental principle of development i.e. equal distribution of benefits. People of Bdeen became the worst looser as a result of failure of Tidal Link channel of LBOD. Development benefiting one end at the cost of other end is nothing but the anti thesis of development as was LBOD.

- Any project costing delicate eco-systems are not in conformity with principles of sustainable development. LBOD caused irreversible damage to fragile lake system comprising of two Ramsar sites namely Jubbo and Nareri. After the collapse of Cholri weir and over 50 breaches in Tidal Link canal, whole eco-system in the lake complex lost its very existence for all practical purposes. Voiceless fishermen paid the price of this disaster as their livelihood was mainly dependent on the lake system bio-diversity. A major reason of this was sheer negligence towards conducting proper environmental assessments of various project components.

- Without extensive participation of stakeholders, specially local communities, a project of such scale is bound to breed troubles. Stakeholder participation in

true spirit is considered as key to success and acceptability of mega projects. Regrettably LBOD was devoid of any trace of stakeholder involvement barring few cosmetic attempts, when it was too late and too little. Not only that stakeholder consultation was not carried out at desirable scale but the project designers and executants never paid heed to apprehensions and genuine complains of stakeholders. All this culminated in bad reputation of project executants and financers. No wonder, what Inspection Panel of the World Bank has reveled in its documents is not much different from what local communities and stakeholders have been saying since years but always went un-heard of.

After the project brought environmental and socio-economic disaster, specially for Badeen communities, local communities approached the Inspection Panel of the World Bank. The Inspection Panel is a forum where affectees can approach for non-partisan investigation of any World Bank funded project. The Inspection Panel mobilized on request of the affectees, submitted its findings to World Bank in July 2006. The Panel's report established that the project was victim of a flawed design, bad execution and poor monitoring. In response to findings of the Inspection Panel, The World Bank chalked out a Plan of Action comprising of short term, medium term and long term measures for damage control. However this action plan repeats a major flaw of LBOD project i.e. lack of consultation with the project affectees. The Inspection highlighted the fact that the stakeholders were not properly consulted in LBOD project at key stages. Interestingly the World Bank started remedial measures with the same mistake and no stakeholder consultation was carried out while designing the damage control and compensation Action Plan. As a result of which

important stakeholders such as civil society and local affectees have started disowning this plan at the very outset.

A World Bank document **ELABORATION OF THE SHORT TERM ACTION PLAN** issued on 30th Oct 06 outlines an Action Plan. A critical review of the document reveals that the Plan of Action offers very little to redress miseries o f the affectees of LBOD project. Let.us take a cursory look over the proposed actions.

The Coastal Areas Development Program (CADP)

According to the plan, it will be implemented by the World Bank funded Pakistan Poverty Alleviation Fund (PPAF) through its partner NGOs. Scope of the project includes (i) access to basic services and infrastructure (ii) higher incomes trough improved crops, fisheries and livestock production, marketing and micro-finance services (iii) secure access to, and better management of the coastal area natural resources; (iv) viable community organizations that can operate in partnership with the public and private sector and NGOs and, (v) improved access to high quality education, information, training and better nutrition and health.

No doubt Pakistan Poverty Alleviation is doing an appreciable work in improving lives of poor echelon of society. However it is not exclusively meant for LBOD affectees. PPAF is already present in 96 districts of Pakistan and implementing its poverty alleviation program through 56 partner organizations. It has completed its first phase in 2004 and now spreading its coverage. It would be pertinent to mention that the PPAF is being implemented through a 90 million US$ credit of the World Bank and the CADP would be the part of this portfolio. Obviously a loan can never be considered as compensation. It is strange to note that miseries inflicted by one loan are being

compensated through another loan. Principally and morally the Bank should not only issue a compensation grant for affectees but should also write off the loan given for LBOD project.

Since Civil Society has serious reservations on the way LBOD was implemented without active consultation with and involvement of stakeholders, the Bank should ensure that the compensation package is also designed, executed and independently monitored through credible civil society organizations, with proper representation of the affectees. It would be pertinent to recommend that a CADP Program Steering Committee should look after the CADP affairs with at least 50% representation from civil society, specially the affectees.

Socio-economic and Environmental Assessment of DHANDS

According to the plan, the Bank and Sindh Irrigation and Drainage Authority (SIDA) will under take this assessment with two objectives. (i) to determine the extent and severity of the adverse impacts that have occurred on the people living near the dhands or in areas that have been directly impacted, and formulate short-term measures and long-term livelihood assistance programs; and (ii) to determine the present physical and ecological condition of the dhands paying particular attention to water quality, biodiversity and habitat, and the productivity and quality of the fishery.

Ecological disaster inflicted upon the lake system is enormous. Socio-economic and Environmental Assessment could be an appropriate beginning but World Bank need to commit for development and implementation of a long term "Lake System Conservation and Management Plan". Only assessment without any clearly defined follow-up would hardly serve any good to the

devastated lakes. The lake system rehabilitation would be a highly difficult job in the given conditions where in absence of Cholri Weir, the lakes' salinity levels have surpasses even sea salinity levels. Knowing SIDA's institutional state of affairs it is unrealistic to assign such task to SIDA, which lacks in relevant human resource and institutional capacity. This scale of work can only be done by highly experienced conservation organizations of international repute. Proper involvement of local fishing communities would be a key to success of any such plan. Rehabilitation of fishing communities largely depends on proper rehabilitation of the lake system.

Rapid Assessment of Existing Local Government Flood Risk Management System

The study aims to identify the gapes in the system and a program to fill these gapes. Immediate measures outlined for vulnerable villages include construction of flood platforms and refuges, construction of small flood bunds, improving drains, and reducing isolation and improving mobility by improving village roads.

In short term this may have some positive impact on certain localities but surely it would not reduce the scale of vulnerability of Badeen communities against perpetual natural disasters compounded by man-made causes such as failure of Tidal Link. Rapid Assessment can also be a useful start but would remain always insufficient unless entailed with a "Comprehensive Disaster Mitigation and Management Plan for Lower Sindh". Since the Tidal Link of LBOD has been a major blockade against natural south-east-ward flows of storm water thus causing flood-bound disasters, the World Bank should commit developing and implementation of such long term plan to avert future disasters. In the given resources and institutional capacity, local stakeholders will not be able to benefit from only

assessment of flood risk management system. It requires enhancement of capacities and necessary infrastructure e.g. trained human resource, equipment, basic infrastructure and flood warning & emergency response systems.

Strengthening of the Right Bank of the LBOD Spinal Drain and KPOD

Under this action the Bank, in collaboration with WAPDA and the Sindh Irrigation and Drainage Authority (SIDA), plans to undertake a detailed field examination of the right embankment of the spinal drain and KPOD. The mission will identify vulnerable sections, identify specific measures that may be needed to complete secure repair of the old breaches and prepare a detailed maintenance plan including estimates of the cost of civil works. The Bank would be willing to provide support for its implementation if requested.

What is very transparent now; that the maintenance of KPOD or Tidal Link will not eliminate the risk of LBOD bound disasters. Through repair and maintenance the KPOD can be restored to its original state at the best, which already succumbed to active erosion and flood. The outfall mechanism of LBOD needs a thorough revision and more serious consideration of alternate options such as outfall through DPOD, Rann of Kucth and Kori Creck. The present outfall approach has already proved a failure and there is little wisdom in repairing the existing system, which will cost as much as a new construction would do.

Accelerated Processing of WSIP Project and Establishment of the Flood Management Planning Program

The Bank and GOS have agreed to establish such a planning program and undertake its implementation immediately when the new Water Sector Improvement Project (WSIP) project

becomes effective. The WSIP project is expected to be presented to the Board in February 2007. The planning studies will include options to improve LBOD, and options to meet storm and agricultural drainage needs.

WSIP is in fact a continuity of US$ 786 million National Drainage Program, which could not meet its targets. Also the WSIP is another loan of 140 million dollars and thus can not be considered as part of any compensation to LBOD affectees. The unfinished LBOD was transferred to NDP and now unfinished NDP is being transferred to WSIP. No one knows which new off spring of WSIP will shoulder its unfinished agenda. Strange enough that NDP with such huge loan ended up with a large part incomplete and people of this country are not even informed about the fate of 786 million dollar project before taking another loan of 140 million dollars.

The Action Plan offered by the World Bank shows that there is no genuine commitment to compensate the affectees of a failed mega project and now the dead body of the failed project is being used to pile new loans on poor people of the country.

Water Shortage, Myth or Reality

Chief Executive of Pakistan General Pervaiz Musharaf has recently said that not only Sindh is drawing its due share of water but Punjab has also granted part of its share to Sindh. He has also claimed that water of Sindh is not stolen by Punjab and people who blame Punjab for that matter are enemies of Pakistan.

The statement sounds too heavy and unrealistic. A person no less than the Chief Executive must take every possible care

before delivering such sweeping remarks. Knowing that water is a flash point of Sindh-Punjab conflict, he should have been more cautious while deliberating upon such issues to demonstrate more fairness to the parties. Shortage of water in Sindh is no secrete. It could easily be confirmed from actual and allocated flows during last few months. The current shortage is some extent natural but it has been artificially made worse in case of Sindh. Let us have a brief insight of the matter. April is a critical month for Sindh because Kharif sowing starts in the month. The province needs adequate water for this period to ensure initial irrigations for major Kharif crops. The province's share for April, according to water accord of 1991 is 121,400 cusecs. During last April it received only 30,275 cusecs. For details refer table No. 1

Table No. 1 Details of water flows in April

Decade	Apportioned Water (Cusecs)	Actual Supply (Cusecs)	Shortage (Cusecs)
One	40,200	31,500	8,700
Two	41,300	30,053	11,247
Three	29,572	39,900	10,328
Total	**1,21,400**	**91,125**	**30,275**

It was said that Sindh's share was reduced because there was a shortage of water in the country. Let us see the record of Mangla Dam in the same period.

Decade	Level in Mangla (ft)
One	1051.80
Two	1053.30
Three	1099.20

The levels in Mangla reservoir clearly indicate storage of about 48 ft. It may be mentioned that Punjab does not face acute

demand of water in these days, since Kharif sowing starts later in Punjab. It also indicates that there was no shortage of water in the country, the only shortage was of fairness. It is a matter of record that Punjab never allows any flow from Mangla to Sindh. It is height of apathy that one province is wandering for a drop of water for it's sowing and another province is storing the water for its future needs. Is it according to ethics of a federation? The story is not yet over. Punjab continued to draw water from Tarbella through Chashma-Jehlum and Taunsa-Panjnad link canals. The flow data (in cusecs) from the link canals is as under

Decade	Chashma-Jhelium	Taunsa-Panjnad	Total
One	11,499	3,000	14,499
Two	7,304	3,000	10,304
Three	8,000	4,000	12,000

It may be mentioned that these link canals were built under Indus Water Treaty. They were meant to supply dry beds of eastern rivers, surrendered to India in a disastrous accord. It was also agreed that the canals would operate only under surplus flows in Indus and with prior permission of Sindh government. The same was continuously violated since many years. Surprisingly the canals were operated under such delicate situation.

To substantiate the claim that Punjab has stolen the water of Sindh, I would like to mention here one important letters.

Chief Engineer (Operation) Indus River System Authority, Mr. Khawaja Ali Abbas wrote a letter number CE (O) IRSA/16/409-10 to Director Regulations Irrigation and Power Department Government of Punjab. The letter draws the attention towards

excess flows in Punjab. It says that Punjab is apportioned 12,000 cusecs per day in the first ten days of February. However the actual withdrawals are 16,000 cusecs. The breakup is as under: Taunsa Barrage (9,000), Chashma-Jehlum link canal (6,000) and Thal Canal (1000).

Water accord apportions equal share to Sindh and Punjab from Indus waters. It implies that both provinces would also share equal deficit during shortages. Let us see what happened during first decades of January and February.

Period	Sindh (cusecs)			Punjab (cusecs)		
	Apportioned	Actual	Deficit	Apportioned	Actual	Deficit
First Decade of January	10,411	8,746	**16%**	12,950	11,370	**12.17%**
First Decade of February	11244	9486	**15.6%**	13851	12116	**12.5%**

The picture is vivid. The deficits were not shared equally. In other words, water of Sindh was stolen. These facts were also mentioned in a letter (No. DR/Rabi/99/64) by Irrigation and Power Department, Government of Sindh to IRSA.

If Sindh's water was not stolen then why the chief executive issued directives to IRSA to take care of Sindh's share and all withdrawals from Indus shall be made with consent of Sindh province. The directives were issued in a meeting held in General Head Quarters, Rawalpindi on May 6, 2000. These

reports were appeared in press and were not contradicted either by CE's secretariat or by IRSA. According to these reports the CE also ordered the closure of Chashma-Jehlum link canal if Sindh has any objection, which was obviously never implemented.

Probably this was the situation, which constrained the then minister of irrigation and power, government of Sindh Mr. A.N.G. Abbasi to say that it is not a matter of simply "choree" but it is "seena zori". These were the words he said in a press conference held in Karachi press club on May 18, 2000. Before this, the then Governor of Sindh Mr. Daudpota also complained that Punjab is stealing 11000 cusecs of Sindh. Fate of the two is a classic example of intolerance among official ranks.

Daily Dawn- July 10, 2001

Bumpy Road to Recovery and Rehabilitation

Epic flood of our memorable history has now receded leaving a trail of devastation behind. Deep scars of this disaster would take years to heal. Although relief phase is yet to subside but concomitant to that more arduous phases of early recovery and rehabilitation can't afford any delay. The camp life ordeal of affectees would soon get over yet their suffering would only change its form as they return to their uprooted abodes.

Early recovery typically requires a rapid assessment that may help initiating a transition from life saving to life sustaining activities in the affected areas. This phase entails issues like resettlement, livelihood restoration, rebuilding of basic infrastructure and

planning for effective rehabilitation phase. The major challenge in this phase would be the magnitude of physical disaster. The scale of mammoth challenge can be gauged from the damage data. According to NDMA's update of 23rd December, over 1.9 houses are damaged in the country. Sindh province appears to be the worst hit accounting for over 1.1 million damaged houses. Estimates of infrastructure such as roads, bridges, government offices, culverts do not appear in this report. However various other reports provide information on these aspects. A report of UNESCO puts the number of damaged schools to 10,000 that corresponds to 1.5 to 2.5 million students affected. Punjab government's initial estimates reckon the damages to the tune of Rs. 67 billion. Website of PDMA Sindh shows staggering damage estimate of Rs. 446 billion. Sector-wise breakup shows housing and agriculture as the worst hit sectors in Sindh with estimates of Rs. 134 and 122 billion respectively. Secretary Industries Department of Sindh has confirmed that 67 industrial units in Sindh have been damaged. Similarly the Sindh Agriculture Department estimates agriculture losses at 102 billion rupees. A report of the UNOCHA on 10th August mentioned that 281 bridges and 283 roads were affected in KPK. Balchistan fretfully decried underestimation of its damages. In the long and short, volume of damages is mindboggling and that explains the lurking ramifications of the bumpy road to rehabilitation. Putting together federal cabinet was informed that the colossal losses are estimated to US$ 43 billion, nearly 25% of the nominal GDP of Pakistan.

Early recovery in the affected areas would demand greater focus on agriculture and its extended strands of livelihood. Since most of the affected areas, specially in Punjab and Sindh have their economy embedded in agriculture, immediate attention is required to secure winter sowing, mainly wheat that guarantees staple diet for millions of households. Any laxity in this would

precariously push the rural economy and livelihood to the brink of collapse that may eventually culminate into a perilous social chaos. To avert this risk, government will have to work on war footing basis mainly for dewatering of submerged swathes, repairing field channels and regulators and mobilizing seed, fertilizer and other inputs. Paucity of supplies would skyrocket prices, initially of inputs and subsequently of commodities. Efficient management of winter crop would partially assuage the miseries for affectees as the local economy would get a shot in the arm with good harvest. This would bring respite for the edgy government and rehabilitation phase would also become less turbulent.

Rehabilitation phase is targeted to restore life to pre-disaster stage. This stage has to focus both on individual affectees and public services. Many experts of disaster management consider rehabilitation as an opportunity of better rebuilding through ameliorated planning, infusing socio-economic reforms, redefining imperatives of rural economy and reconstructing infrastructure as disaster-resistant and environmentally sustainable. Rebuilding major infrastructure and reshaping socio-economic vista require meticulous planning and a turbocharged institutional array to make this transition wrinkle-free. The Independent Evaluation Group of the World Bank has also indicated in its report that Pakistan has a unique opportunity to introduce land and irrigation reforms for long term political and economic gains. The report suggests that the disaster also presents an opportunity to redress or to begin to redress, the long-standing land rights issue related to powerful landlords and indebted tenants in areas like Balochistan, Sindh and Southern Punjab.

Likewise better land use planning can help rebuilding environmentally sustainable human settlements. Stemming from

shear lack of land use planning, villages and towns in Pakistan have become breeding grounds for social strains and environmental nightmares. Unbridled sprawl of villages and towns have completely disregarded the fundamentals of development. Over the years major infrastructure schemes were implemented in the flood prone areas. A vicious web of roads, private dykes, illegitimate irrigation channels and other imprudent creatures was recklessly allowed to sneak into the flood plains. How this environmentally myopic development multiplied the damages need to be delved. Rehabilitation phase is a heaven-sent opportunity to rectify these gaffes. Land reforms specially judicious allocation of katchha land and recovering illegally occupied tracts of riverine forest would be the best harvest of this worst disaster. The insurmountable challenge however would be convincing the ruling elite to let it happen unhindered. Since the fragile democratic dispensation stands on the crutches of unscrupulous landed aristocracy, such reforms look like a distant dream. Otherwise erasing social imbalances would provide bedrock foundation to democracy in Pakistan.

The major challenge in rehabilitation would be resource mobilization. Ever bulging security cost has hemorrhaged the cash-strapped government from its residual liquidity. According to newspaper reports the federal budget has recently been defaced by major changes into defense and development allocation. The former has been allocated additional Rs. 110 billion and the later has been drained by Rs. 73 billion, leaving development kitty in pallor. Council of Common Interest announced a compensation of Rs. 100,000 for every affectee family but the provinces are too impoverished to afford this. The Advisor for Planning and Development in Sindh has already conceded that the slim purse of the province can't afford 190 billion rupees required for the purpose. The international aid response had been sluggish due to medley of reasons. The UN

has launched "Pakistan Floods Emergency Response Plan" seeking US$ 2 billion. The plan aims to provide humanitarian relief and early recovery assistance to up to 14 million people through 483 projects. The anemic treasury needs aid injection to foot the rehabilitation bill that would run into several billion dollars. There is a need of massive public sector investment to reinvigorate the caved-in economy in the affected areas. This investment however should not be restricted to dole outs; it should rather follow the 'New Deal' paradigm of socio-economic recovery of US after Great Depression in 1930s. President Roosevelt declared it a peacetime emergency and established Federal Emergency Relief Administration that pumped money in "work relief" operations. Huge projects of roads, bridges, schools and other public works were rolled out that generated jobs for 4 million citizens. Such a model would proffer multiple benefits of rebuilding public services, rejuvenating the tormented local markets and creating much needed employment for affectees. Creating exclusive small and medium enterprise corridors in urban areas fueled through soft loans would also help affectees to recuperate from crisis. In presence of heavy debt servicing and ballooning defense expenditure, little is left for public sector development, which complicates the dilemma of civilian governments. Considering these harsh realities, rehabilitation phase immediately requires an all encompassing master plan before rolling out muddled development schemes. The plan may comprise short term, medium term and long term targets coupled by a strategy to mobilize resources and efficiently investing them to achieve strategic socio-economic gains.

Factors Responsible for Flood Disaster in Sindh

Heavy rains occurred in Balochistan in the end of June not only brought disaster in Balochistan but the districts of Sindh on its Eastern border also received devastating flash floods. Hill torrents originating from Balochistan entered Sindh through Khirthar hills and inundated vast areas in the districts of Dadu and Shahdad Kot/Qambar. Thousands lost their abodes and were marooned in deep pond of water for several days. Stories of their miseries and negligence of government machinery are widely reported in media. The unprecedented gushing flood from Mula and Bolan rivers badly shattered the flood protection network and the MNV/RBOD network breached at several places bringing havoc to local communities. The floods once again exposed the vulnerability of the drainage project executed by WAPDA on the Right Bank of Indus. A careful review of the flood disaster reveals that the disaster was not merely a natural calamity but the part of credit also goes to bad engineering, poor flood-management strategies and virtually collapsed institutional systems. There is no doubt that Irrigation Department made best possible efforts to manage the flood but the approach was reactionary. Knowing the climatic and topographic features of the area and the history of high floods, infrastructure building in the area required a more cautious approach but the policy wizards (both engineering and political) hardly give a thought to disaster before it really occurs and take its toll.

Torrential Floods in Sindh

Sindh province has two sources of flood. The Riverine flood is more predictable and allows ample time to react whereas the

torrential flood floods leave almost no time to respond. Torrential floods have lesser frequency and duration but very high intensity therefore impact is also sever. These floods normally occur in monsoon months of July and August when its catchment areas in Balochistan receive heavy rains. Western boundary of Sindh is connected with Blochistan through Khirthar hills. A series of ferocious torrents including Mula, Boolan, Khanji, Mazarani, Dillan, Buri, Salari, Shole, Gaaj, Angai, Naing and Bandani bring gushing waters from high altitudes of Khirthar to Kachhi plains of Sindh. This flood requires entirely different management systems, institutional capacities and infrastructure. High floods of 1942, 1944, 1948, 1956, 1973, 1975, 1976 and 1995 have sent several reminders of this fact. Among them floods of 1976 and 1995 were huge in magnitude and caused greater devastation to the flood protection infrastructure and local communities.

Flood Protection System in Kachhi Plains

Before the construction of Sukkur barrage, its command area on the right bank had natural drainage channels to carry torrential floods into Indus River. Part of flow would drain through Main Nara Valley Drain (an old river bed) and would feed into the fascinating echo system of once Asia's largest natural fresh water pond, Manachar Lake. In 1932, when the barrage was constructed, 70 miles long MNVD was properly shaped to carry a discharge of 2235 cusecs. Banks of MNVD also acted as flood protection barrier separating irrigated right bank areas of Sukkur command from hill torrents flood plain. The MNVD was later converted into RBOD by WAPDA to drain effluent from four districts, which devastated Manchar Lake. At one stage WAPDA was also bent upon connecting RBOD with Indus River but after lot of hue and cry by the civil society groups it

retreated. Otherwise WAPDA would have added one more feather in their cap of catastrophic engineering products.

Flood Protection work in the torrential flood areas is much more vulnerable than the riverine flood protection work. In 1935 Flood Protection Bund (FP Bund) was constructed along the natural contours to facilitate North-South diversion of torrential flows towards Manchar Lake. The objective of this 172 miles long bund was to protect irrigated areas from flash floods and safe diversion of flood to natural pond at Manchar. According to the Indus River Commission, flood protection bund has to be provided with 6 feet Free Board above the recorded highest flood. In 1995, flood water overtopped the FP Bund at several locations and it was breached at more than 30 locations. However the restoration work just rehabilitated it to the pre-flood level and did not maintain new free board of 6 feet above the 1995 flood level. Also its remodeling was completed to only 120 RDs and the remaining part of 100 RDs was not remodeled, which faced the recent flood imapct. This fact was also indicated in the Flood Fighting Plan for 2007 prepared by the local office of the Sindh Irrigation Department.

A Flood Diversion Bund has been provided to divert gushing flows of Gaaj Nai in Dadu district. The 6.4 miles long bund also protects FP Bund from the direct stroke of Gaj Nai. In super flood of 1995 this structure was badly damaged. This bund was also later remodeled to pre-flood condition. However no additional strengthening was provided if similar flood strikes again. Luckily this year Gaaj did not bring its usual flow and the bund survived any major damage.

This year the flood came from the north-western boundary with Balochistan and it hit the districts of Shahdad Kot/Qambar and later on Dadu district. Mula and Boolan rivers brought the major

flows, which breached FP Bind at RD 179, 180, 184 and 230. It set off a series of breaches and cuts and 34 breaches and cutes were recorded in MNV Drain. These breaches inundated several small and large villages and it also threatened Qambar and Shahdad Kot towns.

A detailed Technical Assessment is required to establish the role of infrastructure and management system responsible for this havoc. A rapid assessment based on site visits, meetings with local communities, irrigation experts and civil society groups brought the following facts to light.

- Effective early warning system is the key to manage flood disasters. Since torrential floods allow very limited time to respond, effectiveness of this system becomes even more important. It is strange to note that that there exists no flood warning system between Balochistan and Sindh provinces. Since Khairthar mountains receive flood from Balochistan, there should be a mechanism by which Balochistan Government can inform Sindh Government well in time to take necessary precautions. Sindh Irrigation Department has only one gauge station at the mouth of Gaaj Nai in Dadu district. Flash flood from this point hardly takes 12 hours to reach mainstream areas. Even if the earliest warning is received, this duration is insufficient to manage any catastrophe in making. The modern weather forecast systems based on satellite information sources has made it possible to develop a fairly reliable flood warning system. It will definitely cost much less than what the government normally spends on repair of damaged infrastructure and relief and rehabilitation of devastated communities. Environmental, economic and social cost of losses will further justify this much

deserving investment. This can be gauged from the fact that after 1995 flood damages, strengthening of Gaj Diversion Bund at Gaj Nai and FP Bund cost about 700 million rupees to public exchequer. Effective flood warning system will also help timely evacuation of vulnerable areas identified through careful mapping of flood prone communities.

- Infrastructure development in the flood plains is not being designed with prior understanding of natural flood routes. Irrigation experts believe that the road network in the area has also obstructed the free flow of flood. Some local roads and Rato Dero-Khuzdar Motorway are aligned against the flood flows and have inadequate cross drainage provision, causing bouncing of flood water. There is no mechanism whereby National Highway Authority or Provincial Highway Department seeks Irrigation Department's advice on the road alignment in the Kachhi flood plain. This lack of institutional networking is likely to cause more damage in future.

- Time and again it has been proved that tempering nature beyond a limit invites terrible consequences. WAPDA's experiment of converting fresh water MNVD into a saline water channel of RBOD resulted in disaster to Manchar Lake. Now WAPDA is undertaking several drainage schemes in upper reaches through RBOD-III which will canalize effluent from Balochistan's irrigated areas and drain it to the main RBOD drain. A complex drainage network for Usta Mohammad areas is under construction and existing EBOD is being connected to Hairdin drain and Chukhi through new drains under RBOD-III which will be ultimately connected with main

RBOD network. There are strong political elements behind these decisions and WAPDA does not bother to involve Irrigation Department at local level to assess the potential threats which may stem through this made drive of drainage projects. According to officials of the Irrigation Department such coordination is virtually non-existent and if any consultation takes place it is restricted to higher offices which have little understanding of ground realities. Since WAPDA executes federal government's politically motivated projects, it hardly gives any ear to the local irrigation departments, civil society groups and communities. Failure of LBOD should have been enough lesson to learn from but it does not seem happening. Local Irrigation experts also believe that the designed capacity of RBOD-III is also insufficient to carry normal flows of the local drains let alone heavy storm water. In recent flood Miro Khan and Shahda Kot drains experienced backflow since MNV was facing high flood. This could have inundated Shahdad Kot and Miro Khan towns. Therefore this drainage network is posing a permanent threat to local areas. Likewise if Indus River receives heavy flood (above 700,000 cusecs), chances are high that it may choke RBOD-II at Bago Toro hills near Sehwan, which flows very close to Indus River.

- Drainage system in the area is being developed as stand alone engineering infrastructure rather than as part of a management package. There is a need to address the misuse of water in head reaches of Rice cultivation areas to reduce the quantity of drainage effluent. Irrigation system designed in British Period did not require drainage because it was based on judicious supply in head and tail reaches; violation of which has

created the problem. Addressing root cause is more prudent rather than addressing effects, which WAPDA is practicing since years. This wrong approach has made drainage sector schemes in the country a long term liability and source of multiple disasters. This ill motivated approach is being enjoyed by a chain of powerful beneficiaries therefore it does not seem changing in foreseeable future.

- Flood Control Plan for Sindh Province was developed in 1978 and has not been revised since then. Whole landscape has undergone several changes over the years and living with three decades old flood management system indicates the prevalence of institutional bankruptcy. This needs to be revised based on the experiences of last thirty years and new ground realities. Likewise Bund manual was also developed in 1978 and merits revision.

These and many other such facts reveal that the recent flood disaster was not merely an act of unkind nature but it was actually a resultant of bad planning, poor coordination and a complete institutional mess.

LBOD- A Mega Failure of Drainage Sector Development

Finally the Inspection Panel of the World Bank has admitted serious flaws in planning, design, execution and supervision of the much criticized mega projects Left Bank Outfall Drain (LBOD) and National Drainage Program (NDP). The LBOD project commenced on 13th Dec 1984, when IDA, the money lending arms of World Bank approved a credit of US$ 150 million.

Originally approved PC-1 of the project shows the cost of project over 8.5 billion rupees, which ended up with over 31 billion rupees, leaving behind a tragic trail of engineering, environmental, human and socio-economic failures. The Stage-1 of LBOD project was aimed to raise agricultural production of about 1.27 million Culturable Command Area, mainly by reducing water logging and salinity in the three districts of Sindh viz. Nawabshah, Sanghar and Mirpurkhas on the left bank of Indus. IDA and ADB were the major donors of the project. The unfinished work of the project was merged in another mega project National Drainage Project (NDP) of US$ 786, which envisaged extending LBOD to cater for the effluent generated in Punjab through a 1464 kms long drain under National Surface Drainage System (NSDS). District of Badin was used as conduit for the Spinal Drain of the project for ultimate disposal of saline effluent to the Arabian Sea through a 42 kms long Tidal Link Canal. Outfall structure in any drainage project is considered as the most sensitive component, requiring well placed environmental and socio-economic safeguards around the area. Perhaps this was the most orphaned segment of the LBOD project, which took its toll from the poor coastal communities of Badin district. People of the area have been expressing their apprehensions ever since they came to know about the Tidal Link passing through Badin, but all their arguments were rejected by the "experts" considering them ignorant and illiterate fishermen. Project executants even did not pay heed to the concerns raised by the experts and civil society of Sindh since those were not found superior to the un checked dollars coming from generous donors. Though indigenous wisdom prevailed over but only after inflicting irreparable losses upon the local communities and national exchequer. The most tragic part is that now no one owns the responsibility of the failure and therefore no one is ready to compensate the poor affectees

since they don't have any political or any other clout in this country.

Knowing that cries of affetcees always fall on the deaf ears of GoP, GoS and WAPDA, a group of local activists approached Inspection Panel of the World Bank through a formal request for Inspection submitted on 10th September 2004. The inspection request was entertained and a team of international experts studied the situation through the project literature review, visit of sites and meetings with stakeholders. The formal announcement of the final report is expected shortly. The unofficial draft of the report is an eye opener, a testimony of the untold miseries of Badin communities and tell of the shocking negligence exercised by the project designers, executants and supervisors.

The major challenge for the project designers was to provide safe disposal of effluent to sea. Several options were considered at that time. The most logical and natural amongst them was draining it to the south-eastern side of Badin into a natural evaporation pond called Shakoor dhand, spillage of which would have spread in Runn of Kutch. However a major bottleneck was that the lake and parts of Runn of Kutch were falling under Indian territory. To avoid political sensitivities it was decided to transport the effluent via 92 ft wide and 42 kms long Tidal Link canal through a natural lake complex of very high ecological significance. Two of the four lakes Nureri and Jubbo were recognized as Ramsar sites, confirming to the existence of rich eco-system. Crossing a drainage channel through such delicate eco-system, which also supported livelihood for about 15,000 fishermen from about 40 villages, was enough to warrant diligent environmental and socio-economic mechanism. To prevent drainage flow from entering in dhands, an embankment was provided with a 4.5 ft high, 1,800 ft long

"Cholri Weir" to avoid draining of dhands' water during recession of tide thus maintaining minimum water level of dhands. Although the environmental conservation regulations of that time were not too stringent with donors and the borrower, yet it did not require a genius to gauge the degree of risk involved. The Inspection Panel in its draft report also observed that "....the selected alignment for the Tidal Link was politically attractive.....however technically and environmentally risky". Considering the environmental sensitivities, an Environmental Impact Assessment (EIA) for LBOD was carried out in 1989, which also confirmed the risks. The document says "fishing and the livelihood of those fishermen dependent on the dhands, would be drastically affected." However the EIA was not very comprehensive, limited only to biological aspects as against the present day concept of EIA that also covers socio-economic and cultural aspects. Hence the project design and EIA didn't consider any possible impacts on Badin communities and eco-system around Tidal Link.

The Inspection Panel also indicated a number of technical defects in the project design and execution. The design did not adequately account for occasional high intensity storms in coastal areas and the impact of high tide flows. These would have required not only adequate cross section of the disposal channel and arrangement of temporary storage during high tide but also would have warranted strong embankments of tidal link to sustain stresses and erosion. A most baffling finding comes from the two separate soil sample results. In November and December 1983 when project was at preparation stage soil samples analyzed along the Tidal link show stiff cohesive clay with 85% silt content. However at design stage soil testing carried out by Foundation Engineering Ltd. depict the soil with much smaller silt and clay, frictionless cohesive soil. In spite of knowing that the soil in the channel bed is not sufficiently

cohesive, no protection was provided at the bed of Cholri Weir, which was exposed to active erosion during tidal fluctuation. With questionable strength, this soil was also used in sections of embankment of the Tidal Link, only to multiply its vulnerability against tidal wave action. At the top of that the Tidal Link was aligned against the wind direction thus adding more pressure to tidal inflow from the sea creek. All that culminated in collapse of Cholri Weir during the night of 24th June 1998, unleashing an unprecedented environmental havoc with the fragile lake system converting them in saline sink beyond recovery. Authorities made cosmetic efforts to repair the weir but within 4 months the breach became 450 ft wide from southern side and authorities capitulated. A Panel of Experts fielded by the Sindh Government to investigate the failure causes also confirmed the design defects. It concluded that the insufficient embedded length of the sheet piling of the weir and the missing bed protection in the channel were the most critical factors responsible for the failure. It was established that the designers did not consider damaging erosive action of the tidal current on the less cohesive soil.

Before any solution would have been considered, a disastrous cyclone lashed the area on 21 May 1999. It caused 54 breaches in the embankment of the tidal link rendering it completely irreparable. The breached structure unleashed an unprecedented disaster on nearby settlements of fishermen communities and according to official figures about 75 people died in Badeen alone, whereas local communities put toll on much higher side. With this disaster, embankments were washed away and the Tidal Link flow became part of dhand complex and salinity level started rising, thus playing environmental havoc. At one stage salinity of Pateji dhand was measured as horribly high at 68,000 ppm previously measured at 15,000 ppm. The salinity scale can be judged from the fact

that the salinity of sea is around 35,000 ppm, hence Pateji dhand became doubly saline than the sea. The Inspection Panel document using highly pertinent term calls the dhand "biologically dead" (point 177, page-43). Before LBOD project, the lake system would also receive low salinity water from local drains of Badin, constructed as part of Kotri Surface Drainage System. These drains also started reverse flowing particularly at high tide hours, thus spilling into surrounding agricultural land rendering it unfit for cropping. Hence poor communities of Badin not only lost their fisheries and other resources from dhands but also started loosing their agricultural land due to backflow in local drains connected to dhand complex. This has also impacted aquifer in the vicinity thus depriving communities from drinkable fresh water. This multiple disaster is no where quantifiably accounted to gauge the extent of damage inflicted by mega-project on marginalized communities of Badeen. The most important task should have been to start a robust monitoring of effects and considering package for rehabilitation and compensation of the affectees. The Inspection Panel also observed (in fact endorsed the cries of local communities and experts of Sindh) "there were no provisions for an emergency closure of the Tidal Link. No facilities were in place to warn the population and mitigate flood impact. There were no fail-safe provisions in the design." (point 153, page-35).

The most important follow-up should have been initiating a robust monitoring plan to keep a tab on ecological changes surfacing in the area. The 2001 World Bank Mission also recommended the same. This would have helped in gauging the scale of impact and devising appropriate rehabilitation and compensation measures for the affectees but no one seems worried about them, not even officially recognizing that they have paid the cost of imprudent development approaches. Sadly no serious action was ever taken to compensate the affectees. The Panel also observes "there have been significant

shortcomings in implementing previously proposed recommendations to address problems faced by local communities." (point-308, page-73).

Responsibility does not merely lie with the GoP or GoS, the World Bank is equally responsible for this shear negligence. The Bank also forgot to consider Badeen as part of project area thereby ignoring any impact assessment on the area and communities. The official documents of the LBOD always mentioned only three (supposedly beneficiary) districts as the Project Area. Staff Appraisal Report (SAR) of LBOD carries very important note on page 45-46. It reads "Drainage flows from KPOD into the tidal link connecting to the Arabian Sea should have no effect on the natural environment, nor should they affect the livelihood of the fishermen in the area." The same document also gives similar comments on another vital part of the project Chotiaryoon Reservoir. The SAR of 1984 reads "Chotiari reservoir impounding would create negligible damage and resettlement costs since only a few accommodations for fishermen are located in the reservoir inundation area." This underestimation of risk for impact on communities shows how unrealistic documents were leading the project right from the beginning. This was even more obvious from the fact that for the reason beyond comprehension the Bank placed the project under category B, which requires only environmental analysis as against Category A, which requires a full Environmental Assessment. This indicates how much seriousness was attached with the project by the donor. The Bank management admitted this mistake only when the Inspection Panel raised it in its report. Certainly this omission is mind boggling knowing the details of LBOD and associated environmental risks. This was not even rectified in the course of project when environmental impacts became much foreseeable. Both the donor and the executant WAPDA never bothered to regret their baseless

forecasting on underestimated impacts. The World Bank's role need to be further understood as highlighted by the Inspection Panel. One can defend the Bank for lack of environmental safeguards in LBOD by saying that studies like EIA were not in vogue at that time but no one can exonerate the Bank when it accepted Drainage Sector Environmental Assessment (DSEA) for NDP, which was prepared in 1993 long before the collapse of LBOD and the environmental and socio-economic havoc that already surfaced. It is funny to note that the DSEA while supporting the idea of extending LBOD (to cater for Punjab's effluent) says "Environmental studies carried out by Mott MacDonald International (MMI) for LBOD anticipate no appreciable environmental effect". This statement was given in the document of 1993, which followed by chain of failures and disaster and subsequent disqualification of its consultant MMI by the WAPDA, yet this document was accepted by the World Bank for National Drainage Program, which started much later in 1998. Obviously this document was blind on all those aspects and therefore was no more relevant. Since NDP started much later in January 1998 and by that time Pakistan Environmental Protection Act-1997 was already in place requiring a full fledged EIA for projects of such scale and scope. Since completion of the leftover work of LBOD was part of NDP, the Bank should have considered the disaster already unfolded long before the start of NDP and there was every reason to go for a fresh EIA covering all dimensions. Sadly, all that was ignored without any convincing reason. Since the borrower did not demonstrate any appreciable progress on Environmental Management Plan for NDP, the donor should have taken this matter with due seriousness. The Inspection Panel rightly indicates that "as a result of shortcomings in the Environmental Assessment, decision making on environmentally-crucial elements under the Project became less systematic, less informed and more adhoc." (point-333, page-78).

Apart from negligence of environmental aspects, policy flaws and faulty design, another major cause of disaster was poor supervision of infrastructure component during execution. WAPDA was directly responsible for the quality of work. Obviously the government, donors, specially World Bank had its own monitoring mechanism in place but poor supervision provided ample space to the project executants to go almost unchecked with poor design and construction of infrastructure. It would be pertinent to quote two observations made by the Panel.

"the Panel observed that decks of bridge over the KPOD were almost paper-thin (less than 8 mm thick) and had been constructed with very low quality concrete. Reinforcement bars had insufficient concrete coverage and were heavily eroding requiring complete reconstruction of the bridges after only ten years....The Panel experts pointed out that approach slabs and wings of bridges over the KPOD were not properly designed and could not withstand wave action and currents." (Point-558, page-130)

"the Panel also inspected the remaining embankments of the Tidal Link. The experts considered them to be of flimsy construction." (Point-559, Page-130)

These were only few glimpses highlighted by the Panel. This is strange that in spite of lot of cry from civil society of Sindh and local communities, all this went unchecked till years and it was only after 8 years, when in 1996, Joint Donor Review Mission prompted the Bank to request a monitoring program with monthly reports. In November 1996, Joint Review Mission noted erosion of Tidal Link embankments as alarming and requested independent Panel to investigate the problem. It went unheeded and another Bank specialist visited the site and urged immediate action terming the

situation deteriorating. No serious follow-up was done till Tidal Link finally collapsed in 1999, after eating about 800 million rupees. WAPDA and GoS clearly failed in responding the urgency of matter and later on kept passing the buck. WAPDA being the executant should have taken serious measures to address the problem, which was not done and as a result of that people of Badeen had to pay the heavy cost of this failure. The Inspection Panel also noted that during critical phase of construction of the outfall component, no experts with relevant expertise (designing outfall structures, knowledge of coastal morphology, environmental and social aspects) were engaged and all design and implementation work was carried out through Irrigation engineers. The Bank's role was not much better either. The Bank's Monitoring Missions did not give adequate importance to the failure of Tidal Link. The Aide Memoir from the Mission in May-June 1999 made no mention of Tidal Link, despite heavy damages already occurred to it. The Aide Memoir of the fifth Mission/Mid-Term Review Mission in Feb-Apr 2000 noted the GoS request for funding for the Tidal Link and the Bank's unwillingness to fund the same. It took three years when Bank realized the need of investigating the failure and a fact finding mission was fielded for investigation. The Mission's report talked about many technical aspects but made no mention of the effects on local communities. Hence all its recommendations focused only around technical aspects, forgetting completely the rehabilitation of those who paid the cost of this mega failure. This step motherly treatment to the project affectees did not end here. Implementation Completion Report (ICR) of LBOD is also found silent on risks associated with the situation of Tidal Link. This report was also presented to the Board without giving necessary details of the grim situation of Tidal Link. Ironically the Cholri Weir failed only one week after submission of this report. The Inspection Panel noted that "The Panel is concerned that the Implementation Completion Report that was circulated to the Board was insufficiently transparent on important shortcomings

of the Project. The Panel can not explain why management's internal checks did not detect the discrepancies between the final report and supervision reports, and why the final ICR was not amended once it was shown to have misleading in its assessment of the project outcomes." (Point-617, page-142)

In fact the Inspection Panel has unmasked the grim realities of LBOD, which were being denied since years by responsible agencies in the country. Affectees of the project and civil society organizations have been complaining of the disaster unfolded in the wake of this project but WAPDA, GoS and World Bank never admitted their negligence. The report is still pending for the approval of the Board of the Bank. No matter if it is approve or not, but at least the record of the history has been set straight by this document.

Unnatural Causes of a Natural Disaster

Nature becomes the easiest prey of expletives whenver a disaster occurs. What actually compounds the flicker of nature is often preposterous human interface. The recent flood disaster is just another manifestation of this prognosis. There is a dire need to comprehend the role of institutions and systems that exacerbated the impacts.

While the current flood was termed as the disaster of the century, many still speculate it as a prelude of the worst in the womb of nature. Dooms day prophets conjecture, probability of which varies from zero to hundred percent that this was only tip of the iceberg and the powder keg of climate change has yet to spew its spleen in this region that may dwarf the current disaster. Without indulging into the mire of speculations one can safely infer that we ought to be better equipped to respond

the vagaries of nature. Call it climate change or superstition but the temporal testimonies are unchallenged that in August Pakistan received more than half of its monsoon downpour during one week which would normally have taken three months. This year flood peaks sustained for abnormally long durations making the rumbling rivers further egregious. In the southern province of Sindh, three barrages had to brace a furious flow of over 1.1 million cusecs for almost eleven days. This lunacy of flood is a clarion call from the nature that we seriously need to realign our response mechanism to commensurate with such somersaults of climate. The recent experience of disaster response has mocked our administrative adequacy. The institutional tentacles of our disaster response system were practically paralyzed by the enormity of flood. National Disaster Management Authority (NDMA) and its provincial and district extensions were sent into a tailspin by the disaster. PDMAs and DDMAs were found axiomatically ineffective and became media-fodder receiving strident pejoratives from all directions. In disaster response, the lowest tier i.e. DDMA is of paramount importance by virtue of being the first and the last line of defense for communities. The DDMAs, under Section 21 of the National Disaster Management Ordinance are charged to devise disaster management plans for their districts but there was hardly any in place. Certain international donor organizations provided technical and logistical support for capacity building of selected DDMAs in the country but provincial governments seldom considered institutionalization of PDMAs and DDMAs as serious business. The institutional quagmire is also a culpable factor. Though DDMAs are under administrative jaws of provincial government yet there were instances when they were reprimanded by NDMA if they approached any donors for any support. PDMA in Sindh is manned by less than a dozen staff stationed at Karachi without any outreach stations in rest of Sindh. Crippled Sindh

PDMA is hardly managing to breath in absence of trained human resource and other paraphernalia. Punjab till recent days did not have any PDMA at all and those established in the remaining provinces lacked agility due to dearth of human, technical and financial wherewithal. Dead as dodo, our shoddy disaster management machinery was soon on its knees as the disaster unraveled the patchwork of dykes.

Bemoaning aside; lurking catastrophes of future demand serious investment into disaster prevention and response systems. DMAs at all levels need much serious attention now to ameliorate their systems, infuse sufficient human, technical and financial resources and coddle them with reasonable political preference. Ideally DDMAs should also have extension at tahsil and union council level. However the proposition does not envisage inventing mere echelon of bureaucratic strata rather it suggests a more action-oriented, grassroots based, truly participatory, agile and all time upbeat organizational structure that can nimbly respond to calamities. In its current structure DCOs are the embodiment of DDMA, most of them have little prowess in disaster response which demands a well defined coordination mechanism of various entities at provincial and district level. At present coordination picture is too hazy leaving local authorities to often rely on impromptu and impulsive actions.

Disaster/hazard mapping would be the bedrock of a workable disaster response system. Regrettably this very fundamental has yet to see the light of day; in absence of which all the rest becomes hotchpotch of reactions in the days of disaster. Pakistan with its heterogeneous landscape and socio-economic vista is riddled with a range of looming hazards. From Alpine peaks to sprawled plains of lower Indus it has witnessed almost all sorts of major disasters experienced on earth. The creeping

disasters like land degradation, top soil erosion, watershed mauling due to rampant deforestation, pollution of fast dwindling water resources, languishing coastal eco-system and cross-contaminating urban air are mistakenly considered too subtle threat as they can't send shockwaves of horror, albeit their impacts are not less horrendous by any account. Unless this country has an all-encompassing disaster map, planning and preparedness would remain a mirage. Only a dexterously devised hazard mapping can form the basis for a dependable disaster response system and one should not yawn till next disaster to contemplate about.

Lack of appropriate early warning system had been a major cause of otherwise preventable localized disasters. Timely warning is linchpin of any disaster response mechanism as it can assuage the impact to a considerable degree. Flood map of Pakistan is devoid of any network of localized or integrated early warning web. Sans Nullah Leh in the twin cities, the system is nowhere heard of. This is particularly critical in spate flow areas of hill torrents where high intensity gushing flows can easily outpace evacuation efforts. During recent floods, torrents from Koh-e-Suleman knocked communities without ample warning in South Punjab. In 2007 when Yeymin cyclone smacked Balochistan, cloudburst in its catchment caught western districts of Sindh unguarded due to absence of integrated early warning system in Khirthar range. In managed rivers however forecasting a surge becomes easier, although our prevalent system is too primitive by contemporary touchstones. Telemetry system could have offered some respite but the same was not allowed to function by unscrupulous element who thrive on data juggling in the cesspool of system. An aftermath of that was witnessed in resultantly defective preparedness in Sindh where initial flood estimates of 0.8 million cusecs proved mere ruse, leaving the province in lurch to eventually brave worst disaster in its

memorable history. Bereft of a flood management plan, confounded Sindh government had to follow the whim of rudderless water resulting in clumsy decision making. An initial relief breach in Tori bund wreaked havoc in the province and the upper half of Sindh from Kashmore to Dadu/Jamshoro had to pay from the nose. Flood debacle in Sindh has unmasked the fragility of governance structure where individuals dominated the rules of business.

Trust deficit between the federation and the federating units had been a major source of relentless divisiveness on thorny issues. Only few days till the malevolent floods ruled the canals, the riparian provinces were exchanging barbs on opening of Chashma-Jehlum link canal. The Interim Chairperson of the Indus River System Authority (IRSA) sprinkled fuel on the fire by unilaterally ordering opening of the controversial canal. This episode actually bled the old wounds and credibility of the trust-starved federal government institutions touched the rock-bottom. Ironically the mavericks in Federal Flood Commission perpetuated the same mistake by distorting the data of flood effects outlandishly. According to a leading national daily, the FFC reports showed an uncanny swelling of 331 percent in the number of flood affected people in Punjab by inflating the number from 1.9 million in its 20th August report to 8.2 million on 1st September. Not being dexterous enough, the data managers at FFC overlooked the fact that the number of affected villages, households and acreage remained unvaried in both reports. Likewise the report inexplicably reduced the number of cattle head killed in Sindh from 129,416 to 24,788. This data botch-up prompted pejoratives from Sindh government. The Chief Minister Sindh and his comrades deprecated the FFC for its handiwork. At a juncture when country was reeling under a worst humanitarian crisis and desperately needed a modicum of inter-provincial harmony, FFC should have

demonstrated a tad of responsible attitude. This numerical non-sense race was stemmed by the shear lack of credibility in the system prodding stakeholders to balloon the figures to grab better share in the aid pie. The sad part however was that FFC was a federal government organization and should not have acted as stooge for any federating unit. The deep scars of such unpleasant memories will spook provinces in the years to follow and would further complicate the herculean task of those who are in scramble to save federation from hemorrhaging its residual trust and make it tenable.

The experiences of this disaster can become a boon if we can harvest some learning for future years and fortify our institutional systems in a prudent manner.

What Worsened the Flood Disaster?

Malevolent rivers this year brought unprecedented disaster in all provinces of the country. From rickety civil infrastructure to shabby administrative web everything has been washed away by the horrendous disaster. Flood has emerged as the most devastating manifestation of natural disasters on earth. According to Douben, Ratnayake, half of the 367,000 people who lost their lives to natural disasters between 1986 and 1995, were victims of storm surges, river floods or flash floods. From 1998 to 2002, the world witnessed 683 flood disasters with 97% of these visitations occurred in Asia. The trend clearly indicates towards doomsday projections for the years to come and calls for a tectonic shift in current practices of disaster management in vogue in countries like Pakistan.

Indus River that brought the major havoc in parts of Punjab and Sindh provinces is still tormenting human settlements and its

fury is set to catapult more during the leftover monsoon of the season. Both natural and human factors triggered this devastation. According to Professor Martin Gibling of Dulhousie University, Indus was even mightier during a warm period some 6,000 years ago. Then 4,000 years ago as the climate cooled, a large part of Indus dried up and deserts replaced the waterways. The Processor points finger towards localized warming phenomenon as responsible element for the disaster. In his opinion, monsoon intensity is somewhat sensitive to the surface temperature of the Indian Ocean. During times of cooler climate, less moisture is picked up from the ocean, the monsoon weakens and the Indus River flow is reduced. In this backdrop, climate change seems to be a major factor behind pathologically insane monsoon this year. The dominant threat posed by climate change is increased degree of non-reliability of historic data, often making all estimates redundant. Khyber Pakhutunkhwa experienced a unique monsoon this time, which has hardly any precedent in the past. No analysis of historic data would have foreseen what was seen in the recent weeks. This episode is actually even more alarming that anything considered less or unexpected hitherto may happen any moment anywhere with greater severity than imagined. Higher degree of weather unpredictability induced by climate change phenomenon is a real challenge for already fragile flood management systems in Pakistan. Extreme and unpredictable weathers are likely to make disasters a moving target, making it near impossible for flood managers to respond such disasters with given capacity.

Along with several responsible factors that made the disaster excruciating, inter alia the absence of localized early warning system, ineffective disaster management paraphernalia, virtually non-existent integrated flood management plan and a system bereft of proactive planning to mitigate disaster impacts

need to be delved deeper. The disaster has also denuded the capacity gaps of the agencies responsible for disaster management, particularly at provincial and district tiers.

While all provinces have faced devastation, a report of the Federal Flood Commission issued on 20th August reckoned that the Sindh province was the worst hit as it shared 3.68 million among the 7.71 million flood affectees in the country. 211,375 houses of Sindh were highest among the total 303,698 houses battered. Likewise Sindh shared 4,359 affected villages out of 11,027 and the crop lad of 1.55 million acres out of total 4.70 million acres crop land inundated by the sheet of water. Sindh government's latest statements put the toll of affectees to over 7 million people. In all likelihood these digits will swell and would paint more somber picture with every passing day. With a little less severity, disaster in Pakhtunkhwa and South Punjab has also left deep scars on communities.

There is no dichotomy of opinion that the scale of disaster would have outdone the response in any case, yet the miseries could have been much lesser had certain best practices of disaster management been in place. In Khyber Pakhtunkhwa, the Peshawar Met office could not transmit the timely warning of the predicted abnormal showers only because the fax machines in the DCO offices of Charsada and Nowshehra were not working properly. Likewise the initial estimates of flood at Sukkur barrage were derided by the actual flows that made Sindh government manic ultimately leading to enigmatic decision of breaching bunds, railway tracks and roads to ease off the barrage structures and certain strategic locations. Shadowy decision making process has sparked another controversy that may eventually snowball in to a full blown conflict. A comprehensive GIS based flood management plan would have more precisely determined the potential sites for

breaches to eschew major losses. However the media reports suggest that the murky decision were taken at the spur of the moment presumably influenced more by politics than any informed process or institutional mechanism. The breaches in Tori and Ghouspur bands in Sindh actually triggered the worst disaster enveloping the vast areas in north Sindh and rendered several hundred thousand shelter less. As a result of that, districts of Kashmore, Jacobabad, Shikarpur and Qambar-Shahdad Kot are witnessing a worst human crisis in their known history. The worst part was inadequate evacuation notice and unavailability of transport which made their migration intractably difficult. More than seven million people have lost their abodes, source of livelihood and went through a traumatic experience, the spook of which will haunt them for rest of their lives.

Ignoring the very fact that a flow of 10 million cusec would have spilled over any dam of the size of the proposed Kalabagh dam, a clamor was raised that it was mere absence of large dams that has caused this disaster. No engineering or flood management science would substantiate this argument. Sukkur, Gudu and Kotri barrages braced a flow of one million cusec for nearly ten days. Any such dam would not have capacity to absorb this flow. It would have rather made the very dam structure vulnerable to burst with seams and to potentially multiply this catastrophe manifold. Coinciding with floods in Pakistan, China also faced the wrath of floods and at one stage hundreds of soldiers were deployed to prevent a likely disaster due to bursting of Wenquan reservoir that could have inundated Golmud city of more than 200,000 population under four meter deep water wave. In this very year the North-East of Brazil, known for droughts witnessed a devastating flood killing 50 people and leaving 150,000 homeless. The devastation has mainly been caused by bursting of dams on two rivers. In March

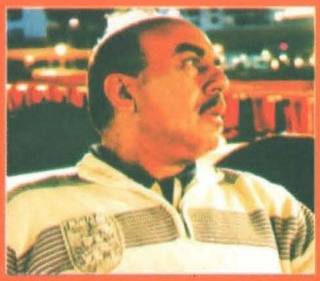
2009, a dam bursting near Jakarta killed scores of people. In fact the damming of rivers has made drastic alterations in the natural flood plains of the Indus and the contracted trachea of Indus is also a major cause for the horrific intensity of the flood. Series of dams and barrages have led to excessive siltation in the river bed, thus elevating the surge to dangerous levels.

Entropic human settlement patter has been another cause of large scale displacement. Mass exodus from the flood plains has transpired the very fact that unregulated human settlements have made the scenario further bleak. Rampant damming and diversion during past decades has changed the flood regime entirely and vast tracts previously part of flood plain was exposed as dry land which encouraged new settlements. Before Tarbela dam, Katcha area of Sindh received a flood of 300,000 cusec almost every year and a flood of 500,000 cusecs for 77% of years. Tarbela and other barrages completely altered the flood pattern, leaving large parts of flood plain barren and thus paved the way for dense human settlements in the strips flanking the river course. According to a report some 50,000 acres of Katacha area is under settlements, roads and government structures. The decades long ignored physical planning of rural areas and skewed development pattern forced marginalized rural communities to recourse to ribbon development along the river course. Dwellers of such areas were noticeably more resistant to evacuation as their asset base was tied to the flood plains.

Unbridled deforestation partly due to lack of regular flood flows and partly due to avaricious elements in politics and bureaucracy also aggravated the flood impact. Absence of thick forest that could have absorbed considerable wave energy compounded ferocity of the flood.

There is a risk of impending social disaster if rehabilitation and reconstruction phase is not designed and executed with transparency and participation of various segments of society specially civil society organizations and private sector. Avoiding such disasters in future needs a long term integrated planning along with a committed and competent execution mechanism. Political will would be the cornerstone if it happens at all.

Daily Dawn-20th August 2007



Naseer Memon is a development professional, who has been working with prominent environment and development sector organizations, academia and corporate sector for more than 12 years. Currently he is Chief Executive of Strengthening Participatory Organization (SPO), one of the largest civil society organizations of Pakistan. He has also been associated with Leadership for Environment and Development (LEAD) Pakistan, Premier Oil, WWF Pakistan and Mehran University of Engineering and Technology, Jamshoro. He has extensively written in English, Urdu and Sindhi media on issues pertaining to governance, human development, climate change, disasters and natural resources. He has authored six books in Sindhi and two each in English and Urdu. He has been lecturing in various universities and serves on a number of advisory bodies as a volunteer. He has been presenting his work on national and international forums.

Center for Peace & Civil Society
A-89/11, Gulshan-e-Sahar, By Pass Gate
Wadhu Wah, Qasimabad, Hyderabad,
Sindh, Pakistan.
Ph: +92 22 2652401, Fax: +92 22 2652401
info@cpcs.org.pk www.cpcs.org.pk